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1992

THE... CANADA LANCET—



A MONTHLY JOURNAL OF
MEDICAL AND SURGICAL ✕
SCIENCE, CRITICISM AND ✕
NEWS ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕



EDITED BY

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VOL. XXXIV

1900-1901



306395
20.11.34

WARWICK BRO'S & RUTTER, Printers,
68 and 70 Front St. West, Toronto.
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THE CANADA LANCET

VOL. XXXIV. TORONTO, SEPTEMBER, 1900.

No. 1.

ORIGINAL ARTICLES.

THE PROGNOSIS OF DRUG HABITS, WITH SOME REFERENCE TO TREATMENT.

BY STEPHEN LETT, M.D., M.C.P. AND S., ONT.

Medical Superintendent of the Homewood Retreat, Guelph, Ont.

Certainly no apology for once and again directing the attention of the practitioner of medicine to this subject need be made further than that the beneficent spirit of modern medicine considers it a stern duty to throw the fullest rays of its kindly light into places where disease has robbed life of its hope and existence of its every pleasure. This duty appears more urgent when scientific facts, incontrovertible evidence can be produced which go to establish the fact, that where hitherto nothing but dread and fear and hopelessness were felt, that no really scientific basis exists for these conditions.

An examination of medical literature happily shows, during later years, a more hopeful feeling with reference to the prognosis of all drug addictions than prevailed in the earlier parts of the century. Still some of the more prominent writers on general medicine—authors of text books, etc.—give such limited space to this all-important subject and dismiss it with an air of such hopelessness or with such statements, as “relapses frequently occur”; or that cures are difficult and rare, that an extended experience so utterly at variance with these statements, justifies and warrants the widest publicity.

In addition, I would emphasize especially the following facts: (1) that the therapeutics of the treatment of morphinism, alcoholism, cocaineism, etc., is not obscure, secret or necessarily difficult, but on the contrary, simplicity itself. (2) The very large proportion of medical men, literateurs, ministers and nurses, who have become victims of this and other drug addictions, and whose mental attitude, depressed enough at best, and who lack all physical and moral stamina because of disease itself, are the very ones having such erroneous views held before them by their authorities. They can scarcely help feeling how useless a struggle against so insidious and powerful a foe would be, and sink into the very “Slough of

Despond," being denied for themselves and their similarly unfortunate patients or friends, the very first and most important aid to recovery, viz., hope and confidence in the outcome of correct treatment and its stability. It appears to me that in the justly celebrated work of Dr. Osler, such statements as, "Persons addicted to morphia are inveterate liars and no reliance whatever can be placed upon their statements," are, to say the least, unnecessarily strong. As before stated, the very first requisite in the successful treatment of such cases is securing the confidence of the patient.

Self defence is one of the strongest of nature's laws and the condition of the unfortunate habitue of this kind whose confidence in the good faith and kindness of his doctor is not established, who surrenders all his drug at once would be much like a traveller who hands over his weapons of defence and trusts to the merits and goodness of the bandit.

Further, the pathogenesis of morphinism or other forms of necromania, does not generally or necessarily include a moral depravity. Dr. Osler himself states the luxury of morphia-taking is rare with us, and with this element excluded why should we consider the lowered moral tone a causative element in this disease any more than in typhoid fever. Indeed, there is to my mind a very striking similarity in the origin of what we now know as acute infectious diseases and the origin of the forms of disease under discussion.

We know that the acute infections require a favorable soil and the invading organism. Can it be denied that in neurasthenics, in those other nerve bankrupts who fall victims to these afflictions, that the favorable soil exists; nay, has possibly been as carefully prepared by years of previous overwork and worry, care and care, as a laboratory culture tube, and the first dose is not infrequently the infecting organism, so to speak.

I have known a case in a man of forty, whose youth had been exceptionally clean, who had never even tasted strong drink until in his thirty-fifth year, who had suffered for years from attacks of severe migraine without even touching an opiate, but to use his own phrase, "after a trying time of great money loss, and the extraordinary care while suffering from a severe physical injury," found himself absolutely owned by morphia after an initial dose of $\frac{1}{8}$ of a grain. To a man whose life for years has been pure and clean, whose relations, commercial, social, and family, have been characterized by the highest integrity and unselfishness, the prospect of being received by his physician as an inveterate liar, etc., is certainly not one calculated to bring out of the unfortunate the best that is in him. To obtain first the confidence, next the good-will and last but not most important of all the self-aid of the patient toward his own recovery, and with these essentials to successful treatment in view, can we not well afford to draw the veil of a kindly charity over such moral obliquities as an unbalanced mind, a defective judgment, and the dreadful prospect of such severe sufferings as Dr. Osler so graphically describes in this article, appears to this unfortunate absolutely essential to the preservation of life itself.

And it is right here, where the pathology of the disease points to the main therapeutics. From an article read by me, before the section of

Medical Jurisprudence and Neurology at the meeting of the American Medical Association in 1891, I may quote the closing paragraph as follows: "Lastly I would enjoin you to pour out your full sympathy to the unfortunate opium habitue who has had a hard battle to sum up enough courage to present himself to you for treatment. He needs help. He needs care. He needs kindness. He has suffered long years of torture and deprivation, been tossed hither and thither like a rudderless vessel upon the turbulent waves of cold and austere world, looked upon as a vicious outcast whose every action is treated with suspicion, his statements doubted, his case mismanaged. Give credence to what he tells you. Extend a rescuing hand to the drowning man. Pour oil and wine on his smarting wounds, let your full sympathy and aid go out towards him. You will then brighten a dark spot in the deepest of despair and have the heart-felt thankfulness of an ever grateful fellow-being."

I may add that the years since these words were written have not only strengthened my opinion of their full correctness, but have also confirmed me more fully in the certainty attending the method of treatment which I then advocated.

It will be noted how important a place I then assigned to the psychical element in the therapy of these neuroses; and if we stop a moment for reflection, must we not recall how large a part this very element plays in our daily practice as we go from home to home, from one bed of illness to another and different one, how large an aid to the greatest of all medical remedies, the *vis medicatrix naturae*, the love and confidence in the family doctor is. And if so potent in general, why deny this aid to these cases of all cases committed to our care. Indeed were I to add another word to the scheme of treatment, I proposed in 1891 it would be to exert greater effort if possible in the direction of securing the greatest possible self-help on the patient's part; and by a firm positive conviction of successful issue in my own bearing and statements, bring out and hold and develop the best elements in the patient's organization, mental as well as physical. I may add parenthetically, that I have seen during critical times, a steadiness of purpose and determination of will to conquer the tyrant, who so ruthlessly pressed and gnawed, so much patience in suffering, that wherever exerted has always won from those who honor courage, grit, and strong will-power exerted in the right cause, words of high praise.

It is not my present purpose to extoll the virtues of any particular drug therapy in the plan I advocate, but on the contrary, to state freely and unreservedly that to a neurotic diathesis, the morphia is probably the least harmful of all narcotics, and as we go forward in obtaining release of the patient from it, our efforts should be to teach this hitherto uneducated, and untrained, and undisciplined organization the all-importance of methodical habits of life, of proper hours of sleep, regular inexorable hours of meals, hours of restful quiet in exertion of mind and body.

In plain words to these untaught children in the ways of getting the most good out of their bodies and brains, act out the higher part of our calling and be the teacher of the only method for modern civilized man to keep a *mens sana in corpore sano* regularity, unvarying regularity,

in every detail of their physical and mental lives. Time of course, is a large element in the successful issue of such cases, where the plan of treatment is carried out as proposed, viz., a very gradual but accurate reduction in every dose and carried down as far as $\frac{1}{10000}$ of a grain. But it should be distinctly remembered that we have an entire human body to reconstruct and so long as the minutest fraction of a drug is necessary to restful sleep or bodily comfort, the cure is far from complete.

Again I wish to add that by an intelligent and gradual reduction, proper feeding and nutrition, etc., we reconstruct and rebuild tissues which constantly require less and less narcotics, and when the last dose is given we have a normal, well-balanced mind, a vigorous strong body, and restored self respect which is equal to any suffering which the ordinary human can stand without an opiate, and possibly a better one.

That the plan outlined here calls loudly for two things, not always at hand, is evident. I mean to specify, however, and state essentials, a proper man and a proper place. But as we do not hesitate to call to our aid the sanatorium and hospital, the surgeon and the ophthalmologist as we need him, so do not let us hesitate, particularly in these "habit cases" to place our patients out of the harmful and damaging surroundings in to a haven of rest and safety. And further let the pages of our text books and our journals bearing the shibboleth "once an opium eater always an opium eater," or any modification of its false and untrue notes be torn from them, cast out, re-written! And let the newer one be illumined with the device, "Faith, Hope, and Charity."

Let us in our advice and handling of these bodies primarily lost in the start of life's race, so act that we may restore to the bed-side, the hospital ward, the pulpit, and the bar, men once again their own masters, and to civilization a corps whose mentality and conduct will surely add to the store of human happiness on the globe!

OCCULSION OF THE BOWELS FOLLOWING APPENDICETOMY: ENTERECTOMY EIGHTEEN HOURS AFTER DELIVERY. OBSTRUCTION FROM TUBERCULAR PERITONITIS.

By ERNEST HALL, M.D., L.R.C.P.,
Victoria B. C.

Mrs. C—, aged thirty-one, mother of two children, walked into my office complaining of pain in the right side; she was ordered at once into the hospital and the following morning I removed a large suppurating appendix. As in pus cases, the open method of treatment was followed. Convalescence was satisfactory, and with the exception of constipation the patient enjoyed perfect health. Eleven months subsequent to the removal of the appendix I found her suffering from pain over the right hypogastric region and no action of the bowels. Examination discovered pregnancy, six and one half months; dullness over the region of pain, and



Portion of bowel removed.

tympanites over the left of abdomen. Massage, enemata, and purgatives failing to afford the desired relief, the occurrence of labor was hailed with satisfaction, hoping that with the additional amount of space gained by the emptying of the uterus we might have greater facility in abdominal massage. Delivery was hastened by anesthesia and instruments, placenta fol-

lowing within thirty minutes; slight hemorrhage. After eight hours of quietness, purgatives, massage and enemata were again tried but without the desired result. The area of dullness in right of abdomen increased, as also did the tympanites in other regions; temperature remained normal. The morning of the second day after delivery, the pulse was 115, feeble and irregular. Fecal vomiting set in. The patient became at times semi-comatose, the pain which at intervals had been intense over the dull area, disappeared. Hypodermics of strychnine were given and, as a forlorn hope, surgical measures were decided upon.

As the patient's condition forbade removal to the hospital, two trained nurses pressed the kitchen utensils and dining room table into service and at eight a.m. thirty-eight hours after delivery the patient was anaesthetized for operation.

Upon opening the abdomen to the right of the rectus muscle a dark fluctuating mass presented, resembling an inflamed and distended gall bladder. This proved to be an enormously distended loop of intestine, constricted by a small fibrous band. After severing this, the loop was withdrawn and examined as to its vitality. The bowel had lost its lustre, circulation was completely stagnated and the coagula extended apparently into the distended veins far up into the mesentery.

As the patient's condition was desperate, the anesthetist warning me that I had no margin of time, the necrosed section with half an inch of healthy tissue at either extremity was clamped, the mesentery ligated, the segment of bowel measuring fourteen inches was excised and the ends united with a Murphy button. The region of operation was hastily wiped with gauze and the abdomen closed without drainage, the patient wrapped in hot blankets and carried to her bed, temperature normal, pulse 115. It is needless to say that we expected nothing else but collapse. Enemata of brandy and saline solution were frequently administered with strychnine hypodermically. At 11.30 a.m., three hours after the operation, there was a slight motion from the bowels. In the afternoon the patient retained beef tea and in the evening there was a free motion and passing of flatus. The following morning temp. 98½, pulse 98. From this time forward convalescence was uninterrupted until the tenth day when temperature began to rise until on the eleventh day it reached 103. The button came away upon the ninth day.

In order to determine the cause of the secondary rise in temperature I examined the abdominal wound and reopened it sufficiently to explore the peritoneum but found everything normal. The lochia had also been normal, and the patient carefully managed to avoid all emotional disturbances. The only explanation that I could give was based upon the fact that the button passed one day before the rise in temperature occurred, and possibly in loosening from its position especially if the necrosis progressed more rapidly at one side of the bowel than at the other as one would expect that the part farthest from the mesenteric attachment would be the first to give way and possibly with the other part still compressed between the segments of the button would exert a no little traction upon the recently formed adhesions as the button was pressed onwards by the bowel contents, and might have caused these recent ad-

hesions to become slightly separated allowing leakage with localized peritonitis. The patient left her bed on the 20th of May and has since crossed the continent enjoying the best of health fully saturated with surgical experience.

I regret that in the unavoidable haste no opportunity was afforded to determine the exact nature of the constricting band, but from its appearance I concluded that it was probably a fibrous adhesion the result of the intense inflammatory action present with the previous appendicitis.

³⁰⁹ CASE 2.—Mrs. R. aged 56, family history good with the exception of one niece who succumbed to tuberculosis. For several years had suffered from flatulence with pain upon right side of the abdomen and occasional constipation. She also suffered from pharyngeal stricture which required occasional dilatation. Constipation becoming marked and the usual remedies failing, medical assistance was sought, I found an area of dullness below the liver with pain and tenderness upon pressure, no tympan-



itis and vomiting. Enemata, massage, purgatives and Faradism failed and as a last resort three drops of croton oil forced the issue and postponed only temporarily. the surgical measures which had been suggested. Patient regained strength rapidly and sat up. After eating a few ripe strawberries the obstruction returned with fecal vomiting and severe pain. The strength rapidly declined and pulse reached 115, when surgical measures were consented to and the patient removed to the hospital.

Operation, median section, general tubercular peritonitis in advanced stages was found. with effusion and universal adhesions, with great distension of intestine which required tapping in several places. It was also necessary

to open the intestine to drain off the fluid. Each opening was carefully closed with silk suture. With the utmost difficulty the intestine was examined as the agglutination was almost continuous. Four strictures of the jejunum were found, one involving two inches requiring resection of three inches of bowel with the insertion of a button, and three smaller constrictions which when freed gave a sufficient lumen. The appendix, gall bladder and pelvic organs were normal. The abdomen was closed without drainage.

During the operation the patient ceased to breathe and was with difficulty resuscitated. As with case No. 1 we put her to bed expecting but a few hours of life but within eight hours the pulse fell to 100, the bowels acted and flatus passed freely, and nourishment was retained.

The patient progressed favorably for one week with the exception of suppuration in the abdominal wound, and was removed from the hospital on the eleventh day. After the first week she gradually became weaker, digestion became impaired with diarrhoea and dysphagia, dying on the twentieth day after operation.

Post mortem examination showed adhesion of all abdominal layers but the skin. Agglutination of intestines. The bowel had united with slight adhesions which unfortunately gave way in the removal of the intestine. The button was found in the sigmoid flexure.

REMARKS.—In constipation gradually increasing in spite of careful regulation of diet and medication, in patients who have previously had inflammatory diseases within the abdomen or who have repeatedly suffered localized intra-abdominal pain, we should not postpone exploration of the abdomen until our patient is *in extremis*. The presence of an area of dulness is additional reason for action. In the female a vaginal examination should be made and in both sexes the rectum should be explored digitally and by speculum, the possibility of malignant disease being kept in mind. Under proper precautions the opening of the abdomen is not a serious matter, not so serious by any means to the patient as the attendant remaining in ignorance of the condition while the strength hour by hour slips away. It is indeed rare that the experienced operator will open an abdomen of one who has a history of severe pain and constipation without gaining sufficient information to warrant the trouble or without being able to give to the patient sufficient relief or satisfaction to warrant the slight risk.

TO RECAPITULATE.—The history of intra-abdominal inflammatory disease with localized pain with increasing constipation with or without any abdominal dulness or enlargement, and with or without fecal vomiting, demand intra abdominal exploration.

THE PATHOLOGY OF CRIME AND ITS THERAPEUTICS.

By LOUIS J. ROSENBURG, L.L.B. and N. E. ARONSTAM, M.D. PH. G.,
DETROIT.

Crime is "an act committed or omitted in violation of a *public law* forbidding or commanding it." This is the definition given by law-writers and judges. Crime, then, is a violation of the wish of the public and must be punished. Such is the *dictum legis*.

But by analyzing more minutely the etiology of crime, we shall find that the above conception is considerably erroneous, that in all cases we have to battle with nothing else but a disease, the result of either a fixed physical malady or a social evil or a combination of both.

"Human actions, whether honest or dishonest, social or anti-social are always the outcome of a man's physio-psychical organism, and of the physical and social atmosphere which surrounds him."

"The anthropological factors inherent in the individual criminal, are the first conditions of crime; and they may be divided into three sub-classes, according as we regard a criminal organically, physically or socially.

First, *the organic constitution of the criminal* comprises all anomalies of the skull, the brain, the vital organs, the sensibility, the reflex activity, and all the bodily characteristics taken together, such as the physiognomy, tattooing and so on.

Second, *the mental constitution of the criminal* comprises anomalies of intelligence and feeling, especially of the moral sense and the specialties of criminal writings and slang.

Third, *the personal characteristics of the criminal* comprise his purely biological conditions, such as race, age, sex; bio-social conditions, such as civil status, profession, domicile, social rank, instruction, education."

Fourth, *the physical factors of crime* are climate, the nature of the soil, relative length of day and night, the seasons, the average temperature, meteoric conditions, agricultural pursuits.

Fifth, *the social factors* comprise the density of population, public opinion, manners and religion, family circumstances, the system of education, industrial pursuits, alcoholism, economic and politic conditions, public administration, justice and police, and in general, legislative, civil and penal institutions." (See Ferrian Cr. Sociol.)

Sixth, *inherited criminal tendencies*. By tendencies, we understand "a soil favorable"; and if the above outlined conditions are such as to permit the thriving of the germ, so to speak, undoubtedly it may develop or transform itself into criminal permanency.

In reflecting upon the foregoing remarks, the question naturally suggests itself, should the criminal be punished, or should he not rather be treated? Since we have considered crime as a disease, treatment is the means by which to combat it. The criminal must be subjected to measures which would rid him of his criminality. This, however, is

evidently not the opinion of the majority in the present exigencies of our civilization; hence our law (which always reflects the opinion of the majority) does not provide for such a theory. But law, as all other branches of art and science, must be subservient—as the latter do—to certain modifications and alterations of advanced scientific theories and truths; for law is but an auxiliary to the great progressive and sublime science—sociology. To convince our readers of the feasibility of our contention, we shall resort to a preliminary but brief description of certain phases of the great nervous system—the brain.

The cerebrum, this great ocean of human intellect, sentimentality and volition, is a complexity consisting of various parts, every one of which plays an important and independent role. All of these parts aggregatively constitute the human brain with its attending functions and manifestations. Each individual part of this great microcosm is termed a “centre,” or a system *per se*. This is not only a unity of brain substance, a mere collectivity of cells, but also a unit of its accompanying uniform and permanent force. Each “centre” is endowed with a definite and characteristic physical and mental function. In other words, it governs certain physical phenomenon and normal psychic features of the body-entirety. By suggesting “normal mental features,” we exclude any criminal tendencies which are but abnormal psychic manifestations in the same relation as disease to health.

The possibility of the existence of abnormal centres in a healthy human brain is questionable, and must therefore be discarded. Undoubtedly, we not unfrequently meet abnormal “centres” in members of the inferior races, but such divergencies we are inclined to place within an animal scope; *i. e.* having the aspect and range of the animal. In such a case we believe that there exists a mal-development of the encephalon; a stoppage-short, in the march of evolution.

Between these morbid “centres” and instincts *per se*, a line can seldom be drawn. Indeed, “centres” are at times apt to act in proxy of natural and appropriate instincts; at least so during the period of mental and physical growth.

As soon as evolution has transformed the infant into child and man respectively, suiting the ethical demands of time and society, those instincts cease to demand a place within the man. Should instinct, however, persist, then its conversion into an abnormal “centre” is most likely to take place.

Evolution also tends towards a high standard in the physical organism; therefore, should physical progress be curtailed at some epoch of primordial life, a reduction of mentality would be the consequence. Congenital dwarfs and so-called “giants” furnish a good illustration. These individuals are more or less mentally perverted, and therefore the psychic features may be either beneficial or detrimental. On *post mortem* examination no gross abnormalities, perhaps, can be detected in the various organs, save a micro-pathologic process in the encephalic structures. These micro-pathologic processes, faint as they may be, suffice to bring forth phenomena that are strange and unnatural in the healthy human organism. To summarize, then, an abnormal perverted or mor-

bid development of the body in general, and of the central nervous system in particular may lead to a mental deficiency susceptible of criminality.

Recapitulating, we state, that crime depends upon one or more of the following factors, as viewed pathologically.

First, morbid conditions of the brain due to vascular disturbances.

a. Conditions due to lack of proper blood supply.

b. Conditions due to increased vascular activity.

Second, morbid conditions due to a conversion of highly specialized cellular elements, into cells of low-grade structure and vitality. It is in this last case that criminal inclinations are likely to arise. To illustrate: In the centre of intellectualization, situated in the frontal lobes of the brain, there are centres governing virtue. Should pathologic processes arise in them from any cause, the opposite of virtue will be the subsequent outcome. The characteristic activity of these centres is abolished, and new ones have sprung up, which though abnormal and morbid, will nevertheless, be accompanied by their respective inferior manifestations.

Viewing psychologically, we may say in the words of Prof. Ferri, that "the psychology of the criminal is summed up in a defective resistance to criminal tendencies and temptations, due to that ill-balanced impulsiveness which characterizes children and savages."

We thus see that according to all scientific investigations, *crime is a disease*; hence, the criminal as previously suggested, needs treatment, not punishment. The march of progress, however, is slow. Civilization only advances by curves. Pope Clements XI as early as 1704, founded a hospital at Rome, where the following inscription appears on one of the walls: "Parum est coercere improbos pœna, nisi probos efficias disciplina."

Montesquien, Beccaria and others, also pointed out some helpful suggestions towards the reformation of our present criminal and penal system. Public conscience, however, did not respond to their sentiments, and our penal system remained as bad in the last century as in the centuries preceding it. A criminal was a creature that every one despised. He had no claim to the sympathy of man. He was cut off from the rest of the world, kept in a dismal den, and treated like a wild beast. In the midst of this state of affairs, a great man arose and changed the entire face of our penal and criminal system. This great man was the immortal sheriff and philanthropist, John Howard. Through his unwearied efforts, he induced the English Parliament to pass an act for the preservation of the health of the prisoners. Through his influence, also, labor was introduced into prisons. Since then, reforms in criminology as well as in penology were, and are, continually inaugurated. In many countries, penitentiaries are no longer conducted with a view to make money. In many countries, politics is not permitted to affect prison administration. In truth, the principle of reformation pervades considerably.

Notwithstanding all this improvement, however, matters are far from being satisfactory. Our criminal law is, in many respects, still miserably deficient, and our penitentiaries, utterly inadequate. In fact, if we are to treat crime as a disease, our entire system needs to undergo many radical changes. At the present, there is a fixed quantity of punishment for every crime. As a result of this method, many criminals, after having served

their fixed period of imprisonment, resort to fresh crimes immediately after their liberation.

Crime *cannot* and *should not* be weighed. Just as no one can determine how long it will take to cure any disease, so no one can ascertain the fixed period necessary for the reformation of a criminal. It is evident that our present system is very irrational.

We would suggest that in the first place, before sentences are pronounced at all, an inquiry should be made into the causes that have led the individual to perpetrate the particular crime. We should next consider the circumstances which coincided with the act. From these we would infer what kind of treatment would most likely benefit the individual in a given case.

In doing this, we must not only do away with definite sentences, but the very institutions where offenders are sentenced must necessarily undergo rigid alterations. They must practically be changed from houses of punishment into *ethical dispensaries*, and *medical institutions*. In cases where the individual is incorrigible and hence, irredeemable to society, special asylums should be erected for keeping them under hygienic and sanitary surroundings, physical and moral culture—in perpetual restraint. This method would substantially correspond to an asylum for the incurable insane. Such a system is not based upon the theory of "getting even." Every notion of retribution is entirely discarded. The alleviation of the diseased condition is the only aim in view.

Thus far, we have discussed crime and its treatment. We shall now attempt to offer a few suggestions as regards its prophylaxis.

First, Control of affairs matrimonial.

a. Prevention of marriage in the insane, and those suffering from pronounced nervous affections; and preventions of marriage in criminals.

b. Restriction of marriage in syphilitics, consumptives, and those suffering from marked constitutional cachexiæ.

c. Restriction of marriage in those with criminal tendencies, and offsprings of criminals.

Second, district institutions for social, ethical and physical culture.

a. Neighborhood guilds on social settlement principles.

b. Play-ground for the children of the densely populated neighborhoods, superintended by competent directors.

If these preventative measures were exercised, we feel certain that the ranks of criminals would soon become greatly decimated. Righteous men, like talented men, are frequently lost to society on account of lack of preliminary aid. Sir Humphrey Davy was certainly right when he said that his greatest discovery was Michael Faraday. Indeed, who knows, perhaps many who are now inveterate criminals, might have been honest, upright and perhaps also, men of great achievements, if assistance were theirs, in time of need.

To act upon the suggestions outlined in this article, might be regarded inexpedient, but it would unquestionless be humane. To treat our criminals as we pointed out, would be to act upon the highest principles of love and justice. May God speed the day!

SELECTED ARTICLES.

CHRONIC CYSTITIS.*

By J. H. MARSH, M.D., Fayetteville, N.C.

Complete and exhaustive discourses on the cause, symptoms, pathology and treatment of chronic inflammation of the urinary bladder are found in the standard works of surgery, and it is not the object of this writer to go into a lengthy discussion of established scientific facts; but if by refreshing the minds of the profession with some of the more important causes and pathological conditions met with in this disease and the practical use of the therapeutic agents at our command for curing or alleviating this class of suffering humanity, a free and full discussion of this important subject is elicited from this society, the object of this paper will have been accomplished.

Chronic cystitis or crystorrhœa in an inordinate secretion of white, glairy mucus, essentially dependent upon chronic inflammation of the lining membrane of the organ. It is analagous in its character to gleet, leucorrhœa and kindred affections, and is merely a symptom of a more serious disease. It is most common in elderly subjects and is nearly always due to some obstacle to the evacuation of the urine, as stricture of the urethra, vesical calculus, enlarged prostate glands, paralysis of the bladder, sepsis, etc. It is a constant attendant upon sacculation, ulceration, hypertrophy and morbid growths of the organ. Once established it is easily aggravated, or reinduced by exposure to cold, excesses in diet, irritating injections, diuretics, over distention of the bladder, neuralgia, retrocession of gout, repulsion of cutaneous eruptions, local injury, and disease of the adjoining parts; as the anus, rectum, vagina and uterus.

The disease generally comes on in a slow, gradual and insidious manner, the inflammation which accompanies it, and which is always the immediate cause of the peculiar discharge, is always of a chronic character. The characteristic symptoms are an inordinate secretion of mucus, and altered condition of urine, frequent and difficult micturition, pain in the region of the affected organ as well as in the adjoining parts, and more or less constitutional derangement. The quantity of mucus mixed with the urine varies considerably in different cases and in different conditions. In mild cases and in the incipency it is usually very small. At a more advanced period it is sometimes enormous, constituting as much as four-fifths of the entire volume. The secretion is usually very thick, ropy and viscid, and after standing sometime it adheres to the bottom of the receiver. During the progress of the disease the urine becomes highly acrid, so that the bladder can hardly tolerate its presence, even for a few minutes. It generally emits an ammoniacal odor; is of a dirty, turbid or blackish color; is rapidly decomposed, and is nearly always

*Read before the North Carolina Medical Society at Tarboro, N.C., May, 1900.

mixed with epithelial, fibrinous, purulent and phosphatic matter. Renal casts are nearly always present, when it is accompanied with serious involvement of the kidneys. Pus may proceed from various sources as the bladder, ureters, prostate gland, or even the kidneys, which are often sadly involved in the mischief. Its presence is always regarded with great attention, as it indicates serious disease of the organs from which it proceeds. The discharge which accompanies this disorder may be mistaken for semen, or mixed with semen, when this flows back in the bladder and mixes with the urine, as in stricture or enlargement of the prostate gland. If any doubt exists this can readily be solved by the microscope.

The prognosis varies with many circumstances as the cause, duration of the disease, the age and constitution of the patient, etc. In its incipient state it is sometimes not difficult to cure; but when it has come to disorder the whole system, the prognosis is more unfavorable. Sometimes the walls of the bladder are ulcerated and thickened to five or ten times their natural thickness, and the kidneys, ureters, and prostate gland are implicated to a fatal extent.

In the treatment of this affection it is of the greatest importance to ascertain the nature of the exciting cause. Stricture of the urethra must be removed, stone in the bladder extracted, hypertrophy of the prostate gland, and diseases of the neighboring or associated organs mitigated, before any reasonable hope can be indulged of a permanent cure. The patient should be put to bed and kept perfectly quiet and a general antiphlogistic course of treatment instituted, even if there be no marked constitutional disturbance. The bowels should be opened with saline cathartic, enemata, and if the secretions are disordered, with calomel, and jalap. All medicines tending to irritate the rectum, such as aloes, etc., should be avoided. The most perfect quietude, both of body and mind, should be enjoined. The diet should be light and bland, consisting largely of milk. The demulcent drinks should be freely given. General or local bleeding is highly recommended in plethoric subjects. Warm baths and hot fomentations are very useful. When by these means the violence of the disease has been subdued then comes the long list of internal remedies, such as balsam copaiba, buchu, uva-ursi and the terebinthinate preparations. In acid conditions of the urine an alkaline treatment is always indicated; while in alkaline states of the urine, acids are to be given. Opiates, hyoscyamus, etc., are indicated for the relief of pain. In gouty and rheumatic subjects, colchicum and the iodides are extolled, and iron for anemia. Benzoic acid has been recommended as sometimes affording relief when everything else fails. Salol has been used a great deal within the last ten years as an antiseptic and with good results in many cases. These agents with many others have been used by the profession with more or less success and all have their advantages in certain cases. I do not wish to detract from the virtues of any of the time-honored remedies which have held their place for so long a time as standard therapeutic agencies for this dread disease; but I ask a discriminate use of them when only they relieve, and not the blind and mechanical use of any class of remedies in all cases of this disease as is the custom at present with so many members of the profession.

I wish further to call your attention to the local treatment of this affliction and to emphasize its importance, and to insist on its more general use by the profession at large as the most rational, and I believe, scientific treatment for chronic cystitis, and the only treatment that will give satisfactory results in the great majority of cases. Irrigation of the bladder should always be done under the most absolute antiseptic precaution, and no air allowed to enter the organ. At the same time attention should be paid to the general health as above indicated. The frequent irrigation of the bladder, which can always be accomplished, if carefully used, with a soft rubber catheter and an ordinary syringe with boiled water or antiseptic solution composed of nitrate of silver $\frac{1}{2}$ to 2 per cent. or stronger; permanganate of potassium $\frac{1}{2}$ to 4 per cent.; boric acid 2 to 10 per cent.; creolin from 1 to 5 per cent.; corrosive sublimate 1 to 20,000 to 1 to 5,000; carbolic acid 1 to 500 to 1 to 250, and many others belonging to the same class of antiseptics. The effects of silver injections are sometimes marvelous, though somewhat painful if used in strong solution. While carbolic acid makes a very soothing and pleasant wash in a number of cases where other remedies produce irritation. In cases which fail to yield to these methods of treatment and in which urination and painful tenesmus are prominent symptoms and are accompanied by a gradual failure of the general health, a perineal cystotomy followed by permanent drainage, will often be required and give marked relief and occasionally result in an entire cure. The importance of a systematic course of treatment in every case should be carefully observed; and if given a thorough trial, it will take its place as the first and most important means of relieving this class of suffering humanity. To illustrate. I will report one of the worst of a number of cases that have come under my care within the last few years. Mr. F., age 59, when a boy received a traumatic stricture from a fall a straddle the sleeper of a house, from the effects of which he suffered several years. After this time he got along very well until fourteen years ago, when the cystitis set up again and with the best of medical treatment he grew worse until the fall of 1887, when an external urethrotomy was performed by Prof. S. W. Gross, he being unable to pass a filiform bougie at the time he operated. Patient got along nicely for several years by passing a No. 16 or 17 bougie once a week, but suffered more or less from spasm in urinating, most of the time. He began at this time to suffer again with the inflammation for which a thorough course of internal treatment was given, consisting of balsam copaiba, buchu, etc., which was kept up until two years ago, when he came under my care. At this time the discharge was almost entirely composed of mucus, etc., and he could not retain his urine more than five to ten minutes at a time, and had no control of his bowels at all, unless under the influence of an opiate. At this time he presented all the local symptoms of a very bad, chronic cystitis, without fever or other marked constitutional symptoms.

Additional to constitutional treatment I began to irrigate the bladder with silver solution, grains 1 to 2 to the ounce twice a week, and in the meantime used warmed boric acid irrigations night and morning regular. Under this treatment he began steadily to improve, and within

several weeks was able to attend to his business. With an occasional irrigation, he kept up very well until last fall. At this time he had a return of all his local symptoms with marked constitutional disturbances in addition. He presented every appearance of suffering from septic poison. His condition in every respect was much more serious than it had ever been before, and he had given up all hopes of getting up again. At this time I brought him to the hospital and began a systematic course of local treatment in addition to his constitutional treatment. His bladder was so irritated that the silver solution could not be tolerated in any strength, and the carbolic acid solution 1 to 500 was used night and morning. His urine was drawn every three or four hours. At the end of two weeks under this treatment his fever, which had ranged from 103 to 104 prior to this time, was reduced to normal and remained so throughout his illness, with one or two exceptions, when he had only a slight return for a day or two. At this time the capacity of his bladder had increased from one ounce to several and his urine had to be drawn only two or three times in twenty-four hours, and his general health was improving satisfactorily. He remained with us several weeks during which time local irrigation of the bladder was regularly kept up night and morning with carbolic solution from 1 to 500 to 1 to 250. His general health improved very rapidly and he returned home about first of last December; since that time with an occasional irrigation kept up by himself he has been attending to his business and writes me while not well, his general condition is better than it has been for several years. While this man is not well, and never will be, I venture the assertion that he would not be alive to-day but for the local irrigation in the treatment of his chronic cystitis.—*The Charlotte Medical Journal.*

ON THE TREATMENT OF ABORTIONS.

BY J. S. BAER, M.D., CAMDEN, N.J.

When it is considered that a large percentage of the cases of chronic pelvic inflammation can be traced to a neglected or improperly treated abortion, the importance of a discussion of the subject of this paper will be conceded.

In the treatment of these cases the same surgical principle is involved that obtains in the treatment of lacerated wounds in any part of the body. No surgeon would for a moment think of leaving a mass of devitalized tissue in a wound to decompose and interfere with rapid healing, and to endanger the patient's life by possible septic infection.

We will assume, then, that in abortions prior to the fourth month we have the same conditions to deal with as in a lacerated wound. Ever since beginning the practice of medicine, I have adopted as a cardinal principle of action the axiom, that an empty uterus is a safe uterus, and only safe when it is empty. The treatment may be considered under three heads: That of threatened abortion; inevitable abortion; incomplete abortion.

By far the larger number of abortions are induced, and we are not called upon to treat them until the inevitable or incomplete stage has been reached. But there are cases where the patients desire offspring, and it is these we are called to see in the first stage. If a case is seen before too great a detachment of the placenta has taken place, as indicated by the amount of blood lost, the patient should immediately be placed in the recumbent posture, if necessary elevating the hips. Perfect quiet and rest, both mental and physical, must be insured.

The patient should not be permitted to rise for any purpose, the use of the bed-pan being insisted upon. She should remain in bed until all immediate danger is past, and excitement and excessive physical effort must be avoided throughout the period of gestation. Opium in some form, preferably morphine hypodermically, should be used at once to insure quiet and control muscular contraction, and should be repeated as may be necessary. The fluid extract of *viburnum prunifolium* has been of decided benefit, especially in cases where an atonic condition of the uterus exists. The vaginal tampon should not be used in threatened abortion.

In inevitable abortion hemorrhage will be profuse, the os dilated, and the membranes or fetus presenting; the patient will be having, or will have had chills, more or less severe, and fever rising perhaps as high as 105° F., dropping to normal as soon as the uterus is emptied. This fever is largely nervous in origin. I have seen it drop to normal after a dose of val-er-i-an.

At this stage I would urge the use of the vaginal tampon, properly applied, as it places the patient beyond any danger from hemorrhage.

There is also less danger of septic infection if the vagina is filled with antiseptic material. Again, it stimulates uterine contraction, and by retaining the blood within the uterus, favors a more perfect separation of the placenta and membranes, and assists the expulsion of the fetal sac, often with the membrane unruptured.

Frequently, upon removing the tampon, the uterine contents will be found lying loose in the vagina or cervical canal, when they can be removed without difficulty. By the use of the tampon, too, more blood will be retained within the vessels. The tampon is left in place for twenty-four hours, with a feeling of perfect security as to danger from hemorrhage but the patient should be informed that her pain will be greater for a while. If this does not bring about the desired result when the tampon is removed, it may be reapplied and another twenty-four hours supervene, when, if the uterus is not emptied, it should be done at once by operative measures. It has been said that the tampon should be removed in from six to twelve hours, and allowing it to remain twenty-four hours may be open to criticism; but I have never seen any harm result, although it has been in place as long as thirty-six hours.

By incomplete abortion is meant the expulsion of the fetus and retention of the whole or part of the placenta or membranes. And by far the larger number of cases that we are called upon to treat belong to this class. The treatment of these cases depends upon the condition they are in when first seen. If at about the fourth month, after the placenta is fully formed, and if there is no fever or odor to the discharges, the tampon may be tried and sometimes the uterine contents will be found loose in the vagina upon its removal.

Whenever there is any fever or fetor, no time should be lost, but the uterine cavity should be cleansed under full antiseptic precautions, followed by gauze packing. The method by which this is accomplished has a great deal to do with the good results that should follow this procedure.

It has been said that the finger is the best curette. In my opinion this is very far from a true statement, for the following reasons: The finger cannot be made as clean as an instrument. The educated hand at the end of a proper instrument can convey to the mind as clear an idea of the condition of the uterine cavity as can the finger. In the large majority of cases the finger cannot be made to enter the uterus and reach the fundus without a degree of force that is unjustifiable. The greatest degree of gentleness of manipulation should always obtain in all obstetrical or gynecological treatment.

The man who uses force enough to puncture the uterus is not a proper person to introduce anything within the uterine cavity. Previous to the time when the placenta has reached such a size and degree of firmness that the uterus can take hold of and expel it entire, the cavity should be curetted, because before that time there will be left behind shreds of the secundines, which may be expelled by nature, but their retention leaves the cavity in practically the same condition as a lacerated wound and subjects the woman to the danger of septic infection an possible death, or to the suffering caused by chronic metritis, salpingitis, ovaritis, or pelvic peritonitis.

Curettage is an operation that should not be undertaken with the idea that it is a simple one. The size and position of the uterus should be ascertained and fixed in the mind. If the walls are thin and relaxed or soft and boggy, it should be remembered, and the degree of force regulated accordingly. The best instrument, in my opinion, for cleansing the uterus is the instrument used for this purpose by Professor B. F. Baer, of Philadelphia.

This work should, in nearly every case, be done under anesthesia, because then you have full control of the patient, and are less liable to cause traumatism. The forceps are introduced guided by the finger, and the blades separated, when any shreds or portions of the placenta present will drop between them and can be withdrawn. The forceps are then separated and one blade used as a curette, when the uterine cavity can be thoroughly cleared of all fragments. This is, of course, done under antiseptic precautions; the uterus is then irrigated and packed lightly with iodoform gauze, as is also the vagina. Ergot should not be used until the uterus is emptied, as it locks up the uterus, places it in a condition of tetanic contraction, and renders the manual efforts much more difficult.

Afterwards ergot should be used because it hastens involution and by its power of contracting the uterus closes the sinuses, and, to a certain extent, the lymphatics, and lessens the danger of septic infection. Rest in bed for a period as long or longer than at full term is absolutely necessary. Antiseptic vaginal douches should also be used.

My experience justifies me in making the statement, that not a single case of abortion should result fatally if seen before infection has taken place, or has proceeded beyond the result of help, and if treated according to the method outlined above.—*Obstetrics*.

MECHANICAL CAUSES OF STERILITY IN WOMEN.*

By R. E. CUTTS, M. D., Minneapolis.

The relative frequency of sterility in male and female is variously estimated, but probably the approximate relationship is one to ten in favor of the male. And while deformities, stenoses and abnormal secretions of the vagina enter into the causes of sterility in the female, yet this percentage is low and usually readily corrected.

It is the pathological conditions existing in and between the cervix and ovary that produce sterility in most cases, and it is to these that I wish to refer in this paper.

While we have the location of the trouble narrowed down to a comparatively short distance, yet it often puzzles the most careful gynæcologist to recognize just what point this tract is at fault.

At the cervix we find conditions obstructing the passage of spermatozoa, such as hypertrophy (either elongation or thickening), eversion and erosions or abnormal conditions of the cervical canal, viz: pin-hole os, a marked angle in the course of the canal or valve-like condition at the internal os. With these conditions we almost always have a catarrhal endocervicitis, which produces a thick secretion which is sufficient with either of the other conditions to occlude the passage except to pressure, and is opened by the menstrual excretion only after more or less pressure has developed. In older women a complete stenosis sometimes occurs. A thin membrane may form to be ruptured by retained mucous or menstrual flow. Occlusion is sometimes produced by injury to the cervix by instruments used in producing abortion, or after vaporization of the uterine cavity when the temperature has been too high or applied too long and over-heating of the cervical tissues has caused destruction of the mucous membrane.

The position of the cervix may interfere with the entrance of the spermatozoa; it may be too near the ostium vaginae, as in the long slender cervix or in prolapsus of the uterus; or in retro-displacements the cervix may point toward the pubes.

In the normal position the direction of the cervix is not parallel with that of the vagina, but at right angles to it. And the cervix lying in the posterior fornix places the os in the most favorable position for the entrance of spermatozoa.

Tumors, malignant and non-malignant, developing either in the cervix or uterus, may interfere with the passage of the spermatozoa.

Of the various forms of carcinoma of the cervix pregnancy is more apt to occur with the epithelioma than with the cylindrical celled or the scirrhous varieties. The epithelioma is often slow of growth and beginning on the posterior lip spreads toward the vagina, while the cylindrical celled variety more rapidly extends up into the uterus, destroying the endometrium. The scirrhous destroys the entire cervix and produces a

*Read before the Minnesota Academy of Medicine, March 7th 1900.

discharge destructive to the spermatozoa. Non-malignant tumors of the uterus often interfere with conception, either mechanically or by setting up abnormal excretions destructive to the spermatozoa or ovum. Enucleation is usually sufficient to effect a cure in these conditions.

Notwithstanding the wonderful make-up of the female generative system it does seem as if nature had complicated conditions unnecessarily in its connecting link between the ovary and uterus. The fallopian tube is, no doubt, the weakest part of the entire system. The smallness, length and tortuosity of its canal all favor its occlusion with the slightest pathological change.

The length of the tube varies from four to seven inches, and the caliber depends on the part of the tube considered, the uterine end having a diameter of about one twenty-fifth of an inch, while the abdominal end is about one-fourth to one-third. Meckel computes the width of the uterine orifice as one-half a line and the abdominal orifice as three to four lines. Some authorities tell us that the uterine orifice is not more than one-third to one-fourth of a line.

When we realize that the generally accepted size of the ovum is one one-hundred and twentieth of an inch, we can see with what difficulty the ovum would be able to pass if the uterine ostium is but slightly constricted.

The tubal canal is smallest at the horn of the uterus and gradually increases in size towards the ovarian end. It is the part having the smallest lumen which has the thickest walls and muscular coat. Hence in distension of the tube either due to pregnancy or hydrosalpinx the tendency would be to empty or rupture away from, rather than toward, the uterus.

With the small size of the canal at the uterine end it would require but a slight catarrh of the endometrium or thickening of the body of the uterus at its horn to completely occlude the duct.

We have been led to believe that the smallness of the cervical canal checked gonorrhœal inflammation at that point. Then why should it not be checked at this much smaller opening? It is claimed by some authorities that only about one-third of the women having gonorrhœa suffer from pus tubes. In other words gonorrhœal inflammation is limited at some point along the course of the mucous membrane, and that, too, in a mucous membrane favorable to the development of gonococci.

In gonorrhœal ophthalmia no attention is given to the tear duct, yet we do not have gonorrhœal rhinitis, and the tear duct is about the same size as the tube at the uterine end. Some contend that the infection is carried from the uterus to the distal end of the tube and ovary by the lymphatics and that this is the reason we so rarely find the proximal end of the tube diseased; that the infection may be carried by the lymphatics from the cervix to the outer end of the tube, skipping the entire uterine mucosa as well as the mucosa of the inner end of the tube. Henroten thinks this the usual route of puerperal infection by latent cervical gonorrhœa.

Whatever the course of infection we know that the abdominal os-

tium soon closes, due to an adhesive inflammation at the junction of the mucous and serous surfaces, often including the ovary and adjacent serous surfaces with it.

The swelling of the mucosa at the inner end of the tube closes it, and as a result the pus and mucus exuding from the lining of the tube are retained. The accumulation takes place at the distal or larger end of the tube, and as the walls are thinnest at this part distention increases and the thinning of the wall continues until rupture takes place, but more frequently transudation occurs through the wall, producing an adhesive inflammation of the serous covering, and thus the adjacent peritoneal coverings are brought in to strengthen the weaker parts of the wall. The inflammation runs its course, the contents of the tube are gradually absorbed and the mucous membrane may approximate its normal condition. The uterine end of the tube not participating in the inflammatory action to any considerable extent, soon becomes patulous and acts as a drain for the excretion of the remainder of the tube, preventing further distention. The adhesions at the peritoneal end of the tube remain, and therefore sterility must result.

Bettman, of Cincinnati, examining such tubes soon after removal, finds the cilia still active even though the tube is distended by pus, showing their marked resistance to inflammatory action.

With every congestion of the pelvic organs, the so-called colds, the proximal end of this tube is apt to become closed temporarily, and it is probably due to this condition that the "hydrops tubæ profuens" is produced. We all know the great frequency of recurrence of acute dilatation in these cases following the menstrual flow. The flow may be normal without pain or unusual symptoms, but after the flow has stopped the distention of the tube begins to take place and lasts from one to ten days. If the position of the tube is normal the attacks will recur less frequently and severely, and eventually give little or no trouble.

It is these cases that defy recognition after the subsidence of all acute trouble. Where there is a history of pelvic peritonitis the condition of the tubes might readily be assumed, but in a goodly number there is no history of acute trouble, possibly nothing but a dysmenorrhœa from puberty.

As is illustrated in a patient operated upon last October, who gave a history of having gone in swimming during her first menstruation, which resulted in a cessation of the flow at that time and no return for several successive periods, a general dropsical condition followed, lasting nearly a year. Menstruation was always painful, although general health was good. This patient had been married about eight years previous to operation, but had never conceived. Curettement had been performed twice for the purpose of relieving the dysmenorrhœa as well as sterility. Local treatment had been tried by various physicians for its relief, but treatments and curettements had always aggravated rather than relieved the trouble.

Examination previous to operation revealed left ovary and tube adherent in the cul-de-sac with what appeared to be the right ovary freely movable, but patient was too sensitive to permit careful examination.

Abdominal section showed right ovary and tube practically destroyed, and what had appeared to be an ovary by previous examination was a dense thick-walled pedunculated cyst from the end of the right tube. Left tube and ovary firmly adherent in the cul-de-sac, the strong fibrous condition of the adhesions and the tendinous appearance of the bands indicating their early formation.

Another case in point is that of a woman seen in consultation last spring. A stout, robust-looking woman with no history of illness, but some dysmenorrhœa at times and discomfort in back. The abdominal wall was too thick to satisfactorily palpate the ovaries and tubes, but nothing abnormal could be made out except slightly enlarged uterus. The patient was very desirous of having children and it was largely on this account that advice was sought. Divulsion and curettement was advised and performed, with quick and complete convalescence from the operation, but conception did not occur and symptoms were not entirely relieved. At her request exploratory abdominal section was performed by one of our gynecologists. The tubes were found closed at the fimbriated end and strong bands of adhesions united ovary and tube, showing a process of long standing.

Many other cases might be enumerated, but these are sufficient to show how indefinite and unreliable may be the symptoms produced by tubal occlusion at the peritoneal end, producing absolute sterility.

Accurate palpation of the adnexæ in fleshy women is impossible, and even in spare women tubes sealed at the fimbriated extremity cannot be recognized unless there are more extensive pathological changes.

In cases of sterility with long standing menstrual disturbances, the writer believes exploratory section justifiable, even though palpation is negative.

It is in this class of cases that conservative surgery of the ovaries and tubes may well be made use of, but it requires much more skill to decide which ovary or which tube to do conservative work on than it does to take all out. Convalescence is more frequently interfered with when a part of a tube or ovary is left than when both are wholly removed.

Under mechanical causes of sterility may be included thickening of the albuginea, preventing the rupture of the graafian follicle.

Chronic ovaritis producing this condition may occur without involvement of other organs, but is usually associated with chronic tubal trouble and in such is probably secondary to this affection.

With the thickening of the albuginea usually occurs a general fibrosis of the ovary, and in this condition not only is the follicle prevented from rupturing, but pressure is made upon the developing follicles, preventing their growth and eventually destroying them.—*Northwestern Lancet.*

THE TREATMENT OF RHEUMATISM.

At a recent meeting of the Society of the Alumni of Bellevue Hospital, reported in the *New York Medical Journal* of February 10, 1900, Dr. A. A. Smith spoke on this topic. He said that in taking up the subject of the treatment of rheumatism one would naturally think first of the various forms of rheumatism. Speaking of the acute articular rheumatism, he said that the patient should be placed in bed, if not already there. He is a firm believer in the protective benefits of proper clothing; a rheumatic individual should be completely clothed in a woolen garment, and should be placed between two woolen covers to sleep. At first he had looked upon this as a fad, but he has gradually come to believe that it is a very decided protective. As soon as possible the patient should be placed under the influence of some salicyl compound, preferably the salicylate of sodium. He is in the habit of giving fifteen grains every two hours until the patient complains of nausea or the drug has markedly controlled the pain and to some extent the temperature. The average patient would object after having taken a hundred to a hundred and twenty grains, but by using a little care much of the unpleasant ill effect on the gastric mucous membrane can be avoided.

Dr. Smith does not fully sympathize with the opinions which he has often heard expressed regarding the marked depressing effects of the salicyl compounds on the circulation. His own belief is that it requires an enormous amount of such a compound to produce this effect, although it is quite true that if the drug produces vomiting or nausea there will be a circulatory depression. Usually within thirty-six to forty-eight hours the patient will be decidedly relieved, and he then gives ten-grain doses at longer intervals. He is entirely in accord with those who believe the treatment by the salicyl compounds to be more liable to be followed by recurrences than other methods of treatment, though one of the common mistakes is that the remedy is not continued sufficiently long. It is not necessary to continue it in large doses, but it should be kept up in moderate doses for from five to ten days. The recurrences seemed to him often the result of allowing the patient to get up too soon. He invariably gives an alkali, preferring the bicarbonate of sodium. The bicarbonate of potassium, when given in connection with the salicylates, is more likely to be accompanied by gastric irritability. He does not continue the salicylates, however, nearly as long as the alkalies. During the first thirty-six or forty-eight hours the bicarbonate of sodium is given in doses of half a drachm every two hours. The irritability of the stomach can be controlled by using an effervescent draught, made by mixing citric acid with the medicine at the time of taking. This is the old Bellevue Hospital mixture. By adopting the precautions mentioned, fifteen-grain doses of the salicylate of sodium could be continued rather longer if necessary—say fifteen grains for perhaps twelve or fifteen doses. He

also insisted upon using the salicylate of sodium made from the oil of wintergreen instead of that made from the refining of coal tar.

In passing, he would say that the oil of wintergreen itself was useful, given in doses of ten minims every two hours, for the acute manifestations. It is best given in the form of globules found on the market. It has been claimed by some that oil of wintergreen is not so likely to be accompanied by delirium or ringing in the ears, yet perhaps the most active nervous disturbance of this kind that Dr. Smith has seen has been with the oil of wintergreen. However, this occurs very seldom, and is easily controlled by stopping the drug and administering a dose of some alcoholic, such as whiskey. He uses oil of wintergreen on the same plan as the salicylate of sodium, giving it every two hours for thirty-six or forty-eight hours, and then lengthening the interval and often diminishing the dose. If the manifestations of the disease were fairly active he would probably continue the dose of ten minims, only lengthening the interval. This would be kept up for several days after all the pain and elevation of temperature had disappeared. The alkali is given in the same way, but is not continued after the first forty-eight hours at the same rate, being administered after this time in accordance with the reaction of the urine, the effort being to keep it alkaline.

Dr. Smith has also used with satisfactory results salophen in ten-grain doses every two hours for the first twenty-four or thirty-six hours, and then in the same doses at longer intervals. He combines the alkali with this as with other forms of the salicylates, for he thoroughly believes in the beneficial results of alkalies in the treatment of rheumatism. He has not obtained satisfactory results from the use of salol in the treatment of the acute manifestations, but he frequently makes use of it for the subacute condition left after the more acute attack. He is such a firm believer in the connection between the condition of intestinal digestion and the development of rheumatism that he always accompanies the treatment with the giving of cathartics, and he likes particularly for this purpose Rochelle salts. It belongs to the family of alkilies, and acts therefore, not only as an alkali, but as a diuretic and cathartic. At the time that salicin was advocated so vigorously he had great hopes of getting better results. He has given it in doses of a drachm, every two hours, but has never seen any benefit from it in the acute manifestations. It does not produce gastric disturbance; it is a capital tonic, and might be given after the acute manifestations have subsided. It seems to him to have the power of preventing relapses. He ordinarily gives only fifteen or twenty grains every three hours, with the object of preventing recurrences.

Dr. Smith has used lactophenin with a fair degree of satisfaction in a certain class of cases—*i.e.*, those in which the acute manifestations have been controlled. In doses of ten grains every six hours it has seemed to prevent recurrences, but it is not satisfactory in the treatment of the acute manifestations. After all, he has used invariably, at the beginning of an acute attack, the salicylate of sodium, for, so far as he knows, it is the most reliable agent for controlling the elevation of the temperature and the pain in the joints in the early stage of acute articular rheumatism, when given in conjunction with alkalies.

Regarding external applications, Dr. Smith said that he first began their use when a medical student, but soon discarded them, because the practice had been discountenanced by the visiting physicians at the hospital. He has, however, returned to them, and now believes that the old application of cotton-batting with oiled silk, cumbersome as it is, has a good effect simply in relieving pain. He has never found any special benefit from the combination of opium, in the form of the tincture of opium, with any external application, although fully aware that this is a strictly heterodox statement. Fuller's application of an alkali with opium added he does not believe to be any more beneficial than the alkali without the opium. He has found that an application of a saturated solution of bicarbonate of soda to a joint is decidedly advantageous. The combination of oil of wintergreen and sweet oil, as used in the hospital, as an application to painful rheumatic joints has in a certain proportion of cases given relief. He has even applied the oil of wintergreen in its purity to the joint, but it is too expensive for such use. He has certainly known patients to be relieved from an application of the pure oil of wintergreen as well as from the combination with olive oil. Both heat and cold have served him well in relieving the pain accompanying acute rheumatism. He is unable to give the indications for using these two applications; he has alternated them or gone from one to the other. Where the wrist joints are swollen very satisfactory results are secured by the application of a splint. This is sometimes true in rheumatism affecting the joints of the hand and the elbow joints. He sees no advantage, however, from using a water-glass splint for this purpose.

In connection with acute articular rheumatism Dr. Smith wished to mention still another remedy that had proved useful. In cases showing a tendency to slight but persistent recurrence he has observed very decided relief from the continued use of tincture of chloride of iron, not only in relieving the anemia, but in relieving the wandering pains so often noted. It is more particularly useful in subjects under fifteen years of age. In another class of cases showing the tendency to recurrence—persons who were thin and anemic—he has seen good results from the administration of cod-liver oil. It seems to protect such patients very decidedly against the development of more acute attacks. In his opinion the iodides are applicable only to the older subjects, quite likely owing to the tendency to the increase of connective tissue in people of this age. The administration of this remedy often seems to be a protection against recurrences.—*Therapeutic Gazette.*

THE PRESENT STATUS OF THE WIDAL REACTION AS A DIAGNOSTIC TEST IN TYPHOID FEVER.*

By ARTHUR R. GUERRARD, M.D.

No method of diagnosis, perhaps, has excited greater interest among physicians in recent years than the so-called Widal or serum reaction in typhoid fever. This reaction, as is well known, is based upon the fact that living and actively motile typhoid bacilli, if placed in the diluted blood or serum of a patient suffering from typhoid fever, within a very short time lose their motility and become aggregated into clumps. Though this peculiar agglutinating influence was originally observed by Pfeiffer, and independently described by Gruber and his pupils, Widal deserves the credit of having first practically applied the reaction on a more extensive scale as a test for the diagnosis of typhoid fever. Since Widal's announcement, some three years and a half ago, of his method of performing this test, the serum reaction has been confirmed by numerous other observers, and it has now become one of the recognized tests in bacteriological laboratories in all parts of the world, not only for routine diagnosis, but especially for the identification of obscure cases of typhoid infection and for the differentiation of the typhoid bacillus.

It is true that the medical journals have contained not infrequent reports of isolated cases in which the reaction was wanting throughout the disease, but in which the clinical symptoms or even post-mortem findings seemed to point to the diagnosis of typhoid fever. Many cases have also been noted in which the reaction was present, though the evidence apparently favored some disease other than typhoid. It has been repeatedly found, moreover, that the blood or serum of patients who have once had typhoid fever may retain for many months its agglutinative reaction. Again, it has been shown that in a certain proportion of cases in healthy persons and those not affected with typhoid fever there may be a delayed moderate reaction (due to substances different from those in typhoid blood, though having similar effects, as in horse serum, for instance) in a dilution of 1 to 10 of blood or serum, the proportion originally proposed by Widal. These observations have not unnaturally tended to cast considerable doubt in the minds of physicians having but little experience with the reaction upon the practical value of the test for diagnostic purposes.

On the other hand, attention has been drawn to the fact that the majority of supposed non-typhoid affections in which the serum reaction has been observed were diseases in which the differential diagnosis is often extremely difficult and which are not uncommonly mistaken clinically for typhoid—viz., malaria, low continued fevers, pernicious anæmia, acute miliary tuberculosis, etc. It is evident in such cases, when the

* Read before the Society of the Alumni of the City (Charity) Hospital, December 13, 1899.

Widal reaction is present, that, without absolute bacteriological findings or an autopsy, the conclusion that the condition is not one of typhoid infection is not justified; and with regard to malaria, it is well to note that the two affections may occur together. Occasionally also, the Widal reaction is very late in appearance, not occurring before the fourth or fifth week of the attack, and sometimes only during a relapse; so that, unless these cases are closely followed up and repeated examinations of the blood made throughout their entire course, the reaction may be missed. Finally, it has been established that, although a slow moderate reaction in a 1-to-10 dilution of blood or serum may now and then occur in non-typhoid cases, rarely, if ever, excepting in typhoid infection, does a complete reaction take place in this dilution within five minutes, and that in dilutions of 1 to 20 or more a quick reaction is never produced in any febrile disease other than that due to typhoid infection, while in typhoid fever such a distinct reaction often occurs in dilutions of 1 to 50 and over.

Furthermore, although in observations of this kind, which depend not only upon the conditions under which they are made, but also upon the experience of the observer, no great reliance can be placed on statistics; still, the results which have been obtained from the Widal reaction, according to recent statistics gathered from various sources throughout the world, are so remarkably uniform in character that we must admit them to be approximately correct and conclusive. Thus, from collective investigations made by Cabot, Anders and McFarland, Stengel and Kneass, ourselves, and others of large series of cases submitted to this test, it appears that positive reactions have been obtained in over ninety-five per cent. of the typhoid cases in which repeated examinations were made, while in non-typhoid cases similar reactions have been observed in only five per cent., some of which, it may be assumed, had had previous typhoid fever, or at least a mild form of typhoid infection.

The method which is now employed by us for the serum test is as follows: A dilution of blood or serum is first made in the proportion of 1 to 10. In the case of dried blood (a drop or two of which has been collected on a glass slide) it is dissolved in a little water and then mixed with the typhoid culture, the degree of dilution being determined by the color. By previously making test solutions of dried blood in water of known proportions and noting the color, the dilution may be accurately enough gauged for all practical purposes. With serum (as collected from a fly blister, and which is preferable for examination, not only because the dilution can be more exactly made, but on account of its containing less fibrinous deposit), one part of serum is added to nine parts of the broth culture. This latter should contain living and actively motile isolated bacilli, although bacilli which have been killed by such substances as bichloride-of-mercury solution also give a fair reaction. If there is no reaction when the mixture is observed in the hanging drop—that is to say, if within five minutes no marked change is noted in the motility of the bacilli, and no considerable clumping occurs—the result is regarded as negative, and no further test of the specimen is made. If complete clumping and immobilization of the bacilli occur within five minutes,

this is called a marked immediate typhoid reaction, and, though no further test is necessary, the reaction may be confirmed with the higher dilutions up to 1 to 20 or more. If, however, upon examination of the mixture there is no marked reaction, but the bacilli only show in the first few minutes an inhibition in their motility and a tendency to clump, but which is not complete within five minutes, it becomes necessary to test this with dilutions at least up to 1 to 20, in order to measure the strength of the reaction. If in the 1-to-20 dilution a complete distinct reaction takes place within thirty minutes, the result is considered positive—that is, that the blood has come from a case of typhoid infection—while if a less complete reaction occurs it is regarded as only probably typhoid. The time allowed by many observers, especially abroad, for the development of the reaction with the higher dilutions is from one to two hours, but thirty minutes seems to us a sufficient time limit. Positive results obtained in this way may be taken as conclusive evidence of the recent or previous existence of typhoid infection in the patient. A previous attack of typhoid within a period of one or more years, exceptionally, vitiates the value of the reaction. On the other hand, the absence of reaction in any one examination does not exclude typhoid; so that, if the case remains clinically doubtful, repeated examinations should be made every few days.

In conclusion, from a review of the published reports on the subject, and from an experience in the health department laboratories with the practical application of the Widal reaction extending over three years and including the examination of fifty specimens or more a week, it may be said that this test, when performed with due regard to the avoidance of all possible sources of error, is as reliable a method of diagnosis as any other bacteriological test at present in use. It is simple and easy of performance by any one versed in bacteriological technique. The serum reaction is never present in other diseases, if correctly tested and in the proper dilution, as is so often the case with the diazo reaction of Ehrlich. It is better adapted for routine employment than are any of the methods now in use for isolating the bacillus from feces or urine. It is certainly safer than spleen puncture; and it is not so difficult as, though far more reliable than, the leucocyte count. The reaction does not appear, as a rule, during the first few days of the disease, but it is usually manifest before the rose-colored eruption appears, though occasionally it is very late in appearance, and in rare cases may be entirely absent. A negative result can not be considered as having much significance, but a positive reaction when present—previous typhoid or an earlier reaction excluded—is almost as strong evidence of the existence of the specific infection as the actual demonstration of the typhoid bacilli.

Thus, while the Widal reaction has undoubted limitations, it is, nevertheless, of inestimable value as an aid to the clinical diagnosis of irregular or mild cases of typhoid fever.—*N. Y. Med. Journal.*

THE TREATMENT OF INFECTED WOUNDS.

M. Felix Lejars (Paris) said that in recent years the treatment of infected wounds has formed the subject of numerous experimental and bacteriological researches. They had yielded valuable information but all required to be controlled by observation. For the profitable study of the problem, which is very complex, it must be considered under two heads: (1) Recent infected wounds in which the infection has not yet expressed itself in local or general reactions. These might perhaps be better designated recent wounds assumed to be infected. This assumption, however, should in practice be extended to every accidental wound, and bacteriological examinations show that it is well founded. It is known that even operation wounds are far from being amicrobic. On the other hand, there are no means of recognizing in a recent wound by what microbes it is contaminated, what is their virulence, and what their ultimate effect. It has been proved that neither the look nor the visible course of traumatic foci are in this respect sufficient guides. *Therefore, every accidental wound should be treated as infected.* But how is it to be treated? It is known that the absorption of virus through the injured surface is almost immediate; the rapidity of absorption, however, varies with different microbes; moreover, the dose increases with the duration of impregnation. From this may be drawn the conclusion that the cleansing of the wound, in order to be efficacious, should be as early as possible, but whenever it is done it will be useful. Experience has shown (a) that we are powerless to destroy all the germs in a traumatic focus; (b) that the natural defensive power of living tissues plays a preponderant part in the fight against infection. The very first procedure, therefore, is mechanical cleansing, which should be minute and complete, aided if necessary by enlargement of the wound and removal of dead tissue. Care should, however, be taken to respect the integrity of living cells, which should be helped in their defensive reactions, nothing more. Sterile water, artificial serum, sterilised boiled compresses entirely answer these requirements; it is not the nature of the fluid used but the method of its employment that gives practical results. Hurtful in large doses, antiseptic solutions, when diluted sufficiently not to alter the living cells, have really no other useful effect than mechanical cleansing. Physical conditions of the same order have to be fulfilled by the dressing. It must be aseptic, absorbent, protective and immobilising, in a degree applicable to the different regions and for a variable period. (2) Infected wounds, the infection of which is expressed by more or less pronounced reactions local and general. Here, also, two conditions have to be distinguished: (a) the clinical signs of infection may be of recent date and the wound is not suppurating; (b) the wound is in active suppuration. In either case specific serumtherapy is indicated; this Lejars considers the scientific, natural method, and the method of the future. Unfortun-

ately as yet only antitetanus and antistreptococcus serum are available. The former is only efficacious as a preventive, while the latter has mostly been used in puerperal fever and erysipelas. Against other microbial infections of wounds we have as yet no effective serum, and against associated infections we are powerless. This makes the treatment of the local focus all the more necessary, and, as in dealing with cases belonging to the first category, the surgeon has to set before him a twofold object. The first thing to be done is to cleanse the whole surface of the wound; then it should be dressed so as to favour exosmosis, continuous drainage of the whole surface, and prevent all stagnation and superadded infection. The object of the cleansing is especially mechanical, while that of the dressing is especially physical. If these conditions are thoroughly fulfilled the surgeon will have, as far as is possible, protected the living cells against the attack of septic agents without hindering their defensive reactions. In dealing with a suppurating wound the same principles must be applied—through exposure of the suppurating focus, and complete and continuous drainage. In certain putrid and gangrenous forms, and in burrowing wounds, oxygenated water, which appears to have a powerful effect on anaërobic microbes, is most useful. (3) Infected wounds with grave general infection—traumatic septicæmia. Here also it is to specific serumtherapy that we must look for rational treatment, but its action is much less certain than in the early stages of infection. At present only experiments can be recorded, and even antistreptococcus serum has seldom been used in traumatic septicæmia. Lejars thinks that it deserves to be tried on a more extensive scale in large doses. In the meantime we must use local treatment preceded by thorough cleansing of the focus. On the other hand, artificial serumtherapy, by restoring the blood pressure and stimulating diuresis, increases the natural defence and vital resistance of the organism.—*Brit. Med. Jour.*

SALOL AND PETROLEUM IN THE TREATMENT OF INFANTILE DIARRHOEA.

W. E. Fothergill and John Penny (*Med. Chronicle*, April, 1900), endeavored, during the summer of 1899, in their work at the dispensary, to ascertain if the statistics as to infantile diarrhoea could be improved by the use of salol or petroleum or both. For this purpose slips were provided to be filled out and filed with the history of each case. Where the food was suitable, as breast milk or milk and barley-water, no change was made in order to give the drugs a fair trial. More than half of the slips were not completed, as the patients failed to return. The writers had been at work in this district for several years, one at the dispensary, the other as house-to-house visitor, so that the children treated were personally known in many cases. In the cases that did not return, probably the majority were cured. Seventy-one cases had completed slips. All of the children were under two years of age. Eight were entirely breast-fed, all of whom recovered. Of the remainder, only three died. In eight cases there was no good result from these drugs, so that others were substituted. Sixty cases, therefore, recovered on this treatment. Salol alone was used in thirty-six cases. The drug was used in powder form, half a grain every three hours being the minimum dose, three grains every four hours the maximum; the usual dose for a child a year old was two grains every six hours. Improvement was generally rapid, and the stools became normal in from two to seven days, although some of the children had been ill for two weeks. The cough so often coincident with summer diarrhoea was not relieved by the salol. In several cases the vomiting was rather aggravated than relieved, the powder seeming to act as a mechanical irritant. The conclusion in regard to salol was that although a valuable antiseptic, it is better given in some demulcent and not more than twice daily.

Petroleum was used in thirty-four cases. The preparation was an emulsion containing 33 per cent. of petroleum and the doses varied from ʒss thrice daily to ʒi every four hours; the usual dose for a child a year old was ʒi of the emulsion (℥ 20 of petroleum) thrice daily. In two cases salol was substituted at the end of a week. One child died. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhoea was checked, and the stools soon recovered their normal color and consistency. The emulsion seemed also to favor recovery from the accompanying bronchial catarrh. It is said that the whole quantity of petroleum ingested may be recovered from the faeces. Clinical observation shows, however that petroleum has an influence on mucous membranes other than those of the alimentary canal. Its action in cases of bronchial and vesical catarrh can be explained only by supposing that after absorption from the intestines petroleum is excreted by various organs. These experiments seem to prove that infantile diarrhoea can be treated successfully without the use of opium or astringents.—*Amer. Gyn. and Obstet. Jour.*

THE USE OF ICHTHYOL IN SCARLET FEVER.

BY A. SEIBERT, NEW YORK.

Professor Seibert describes the therapeutic application of ichthyol in scarlatina in the form of inunctions over the entire surface of the body and of irrigations of the pharynx. He has used a 5 per cent. to 10 per cent. ointment of ichthyol in lanolin in scarlatina since 1884. The ointment is applied once or twice daily, in such a manner that the whole body is covered and the ichthyol is rubbed into the skin until hardly any ointment remains on the surface. The skin of the patient assumes a brownish hue after the inunction, which is made with the tips of the fingers. The object of the inunctions is to rub the ointment into the skin in such a manner as to bring the ichthyol into direct contact with the capillaries and lymph vessels in which the bacteria are lodged. The effect of these inunctions are as follows:

The swelling of the skin is reduced after the first inunction. The pruritus, which is excited by the ichthyol, disappears quickly. The occurrence of ulcerations and phlegmonous and erysipelatous infiltrations in the skin is prevented. The temperature is lowered in all uncomplicated cases after a few hours to the extent of from 1° to 3° F. The sleeplessness and restlessness improve.

He has treated fifty-six children in this manner, and this group did not include very malignant nor very mild cases. The inunctions also serve to lessen the liability of the other children in the family to contagion, and the disease was limited to one child in each family where the inunctions were employed.

The intensity and duration of the desquamation were considerably lessened by the inunctions, which were continued throughout this stage. There were never any toxic symptoms from the use of the ointment.

In the streptococcus infection of the pharynx and tonsils which accompanies scarlatina the writer has also used ichthyol in the form of irrigations. The advantages of this drug over bichlorid of mercury and other antiseptics used in the throat are its non-toxic character (even in large doses in young children) and its bacterial value, which is shown by the action of dilute solutions on pyogenous and erysipelatous streptococci. The method of employing these irrigations was as follows: In order to secure a thorough mechanical cleansing, as well as a chemical disinfection, $\frac{1}{4}$ liter of a 5 per cent. solution of ichthyol was used in an irrigator that was suspended about three feet above the patient. The 5 per cent. solution was found to be sufficiently strong, and yet could be swallowed in considerable quantity by infants with impunity. The warm liquid was injected into one nostril and then into the other, and allowed to escape through the mouth. All the patients received in addition the following mixture by mouth and inunctions of 5 per cent. ichthyol ointment all over the body every six hours:

R

Acidi carbolici	gtt. 10.0
Potassii iodidi	1.0
Tincturæ iodii	2.0
Aquæ distillatæ ad	120.0

M.S., a teaspoonful every hour.

The irrigations of the nose and throat were repeated every six hours. The writer has used these irrigations for the past $4\frac{1}{2}$ years with good results. In all cases the children, and often the parents, objected to this method of treatment, but the marked improvement that followed the first few irrigations usually satisfied the parents. It is always advisable to demonstrate the method of irrigation once even if there is a trained nurse in attendance.—*Pediatrics*.

LUMBAR PUNCTURE. THE TECHNIQUE OF.

In discussing the choice of location at which the puncture shall be made there are three chief requirements to be considered :—

1. That the needle shall find ready entrance to the subarachnoid space.
2. That the tapping be made at the point least likely to admit of damage to the nervous structures of the canal.
3. That the fluid obtained shall be as rich as possible in sediment.

The first requirement is sufficiently well met by entrance through any of the lumbar spaces or through the lumbo-sacral space.

Possible injury to the chord can be excluded by entering at some point below the third lumbar vertebra. In adults it is perfectly safe to puncture between the second and third vertebræ.

The last requirement is best fulfilled by tapping in the lumbo-sacral space.

If the puncture is made for purposes of diagnosis, then it seems best to enter the lumbo-sacral space and to have the patient, if a child, in the sitting position. With adults, and especially with those who are delirious or comatose, or who are greatly prostrated, it is often impracticable.

Whatever the position decided upon, the essential point is to secure the greatest possible degree of ventral flexion of the spine. If the child is in the sitting position, it must be bent well forward and firmly held. If the horizontal position is selected, the patient should be made to curl up, with the knees and chin as near together as possible.

General anæsthesia is, in most cases, entirely unnecessary. By anæsthetizing the skin with cocaine or a freezing spray the needle can usually be introduced with very little discomfort. Where the patient is delirious or very restless, it is well to have at least two assistants who can hold him firmly in the proper position and can prevent any sudden movement.

Just such perfect asepsis, as to field of operation, instruments, and hands, is demanded in this small procedure as would be exercised by the surgeon in opening any serous cavity.

An antitoxin needle 4 or 5 centimetres ($1\frac{1}{2}$ or 2 inches) long and 1 millimetre in diameter serves admirably in children. For adults the needle should be 7 or 8 centimetres long and of a diameter sufficient to give the rigidity needed to penetrate readily the tough ligament.

While the needle can be introduced without being attached to the syringe, the latter is a distinct aid to one in directing the needle accurately. If the syringe is sterilized by soaking in carbolic solution, it must be thoroughly washed out with sterile water before being used.

A sterile test-tube stoppered with cotton should be at hand to receive the fluid.

A mercury manometer for estimating the cerebro-spinal pressure is

very convenient, but, as Stadelmann says, an approximately accurate idea of the pressure can be obtained by using a bent glass tube of small calibre. The short horizontal limb is attached by a bit of rubber tube to the needle, while the long perpendicular limb will record the height of the column of fluid.

After the desired space is located, the interval between the spines is marked with the finger of the left hand, and the needle is introduced at a point opposite the upper edge of the lower spinuous process and in a line just outside (*i.e.*, a few millimetres from the median line). The needle is directed *very* slightly upward and toward the median line, with a view to having it in the median line when it enters the subarachnoid space. As the needle passes through the interlaminar ligament, the resistance is increased and a slight grating feeling is noticed, beyond this the needle slips in very easily, and is introduced until fluid begins to appear in the syringe.

In children the fluid is reached at a depth of from 2 to 3 centimetres; in adults, at from 4 to 7 centimetres. If bony resistance is met in introducing the needle, the latter is to be withdrawn for a slight distance and directed at a slightly different angle.

After the fluid appears the syringe is taken off and the fluid collected in the sterile tube. It is much better to let the fluid run from the needle than to aspirate with the syringe.

The amount of fluid to be removed will depend upon the purpose of the puncture. If for diagnosis alone, 10 or 15 cubic centimetres are usually ample. If for therapeutic purposes, it may seem desirable to remove several times that amount. The quantity of fluid which can be safely withdrawn varies enormously in different individuals and under different pathological conditions. Perhaps the safest guide is the condition of the patient. The flow should be stopped at once upon the appearance of such symptoms as headache, faintness, or a change in the character of the pulse.

Kroenig relies upon the manometer, and stops the flow when the cerebro-spinal pressure reaches 125 millimetres of water. This he regards as the normal pressure when the patient is in the horizontal position.

When the needle is withdrawn, a procedure which usually requires some force, the skin wound is covered with a bit of sterile cotton and with collodion.

Accidents are infrequent and, for the most part, trivial and unimportant, although they may be annoying.—L. A. Conner (New York Med. Jour., May 12, 1900).

THE TREATMENT OF GONORRHOEA.

There is no single remedy or procedure capable invariably of curing gonorrhœa within a certain limited time. It is pretty generally agreed that an ordinary uncomplicated attack of specific urethritis is not a dangerous disease. The conditions are, however, different at once a complication arises, and in accordance therewith gonorrhœa may become a serious or even a grave disorder with unlimited possibilities in the way of sequelæ, of which some of the best known are lymphangitis, adenitis, stricture, orchitis, epididymitis with secondary impotence, prostatitis and suppuration of the prostate gland, cystitis, pyelitis, pyonephrosis, neuralgia, rheumatic affections of the joints and the tendon sheaths, metastases in vital organs (endocarditis), tuberculosis, especially in the genito-urinary organs, neurasthenia of varying severity, and actual psychoses. While it is true that some of these complications and sequelæ, such as stricture, of the urethra, may result from the long duration of the disease, and that others are unavoidable and no cause can be discovered for them, it is likewise true that some complications may be due to improper treatment, or at least their development may be favored thereby. The fundamental principle in the treatment of gonorrhœa is that the therapeutic measures employed should be so applied that complications may, so far as possible, be avoided.

With these preliminary considerations Casper (*Berliner klinische Wochenschrift*, No. 22, 1900) advises against all abortive treatment as not accomplishing the desired object, but favoring the occurrence of complications. The symptoms of the disease do not appear until some days after the gonococci have penetrated the mucous membrane of the urethra. The introduction of instruments into the urethra during the acute stage, so long as a florid, purulent discharge is still taking place, is contraindicated, as are also injections that induce irritation of the urethra or aggravate existing inflammation. Some case of acute gonorrhœa set in with marked inflammatory manifestations, while others are wholly unattended therewith. The latter occur especially in patients who have previously had gonorrhœa. In both groups injections may be begun on the first day, but in the first no remedy should be employed that causes irritation or aggravates the inflammatory process, such as preparations of silver. Under these circumstances potassium permanganate may be employed in dilutions of from 1:10,000 to 1:8,000. In the less acute stage injections of antiseptic silver salts are useful, and of these the nitrate is the best. This may be employed first in a concentration of 1:10,000, gradually increased to a strength of 1:4,000. Both of these are irritating and should therefore never be employed alone, but always in association with astringent, secretion-reducing, and antiphlogistic agents. Thus, a combination of silver nitrate with potassium permanganate is injected first; then silver nitrate and zinc sulphate are subsequently employed; and finally potassium permanganate and zinc sulphate in the last stage.

The more frequently the injections are made the better. Attempts have been made to destroy the gonococci and control the secretion by means of a single preparation—zinc permanganate—but this has not proved so successful as the combination of zinc sulphate with potassium permanganate.

Similar principles govern the treatment of acute gonorrhœal cystitis. In a large number of such cases improvement and recovery can be brought about by means of diet, rest, diuretics, and balsamics. Should these fail and the second portion of urine voided remain turbid, resort may be had to irrigation through a catheter of the posterior urethra with solutions of silver, but this should not be begun too early. In cases of chronic gonorrhœa in which the injections, usually made by the patient, do not reach the affected parts, namely, the posterior urethra and the more superficial layers of the submucosa, relief can be afforded with certainty and promptitude by means of instillations according to the method of Guyon, or irrigation with potassium permanganate according to the method of Janet, or a combination of both.

Two varieties of chronic gonorrhœa occur that do not respond even to local measures, namely, one that resists treatment of all kinds, and another that yields only so long as the treatment is maintained, but recurs as soon as this is suspended. The first is almost always glandular and infiltrating, and the other is attended with the presence of inflammatory processes in adjacent glands, especially the prostate. The former is rather uncommon and the treatment should be jointly mechanical and chemical. Bougies may be used, dilatation of the urethra may be carefully and judiciously practised, local urethrotomy may possibly be undertaken, and injections and irrigations should be employed in the intervals.

The proportion of cases of chronic urethritis complicated by prostatitis is quite large. The diagnosis must be based upon the discovery on microscopic examination of leucocytes in the fluid expressed from the prostate gland through the rectum. The results of treatment in these cases are not very gratifying. The composition of the prostatic secretion is uninfluenced by the use of iodine or ichthyol or electricity, or of injections of hot water, although the subjective symptoms may be relieved by the last. Cauterization has been proposed in the treatment of prostatitis, but the results cannot yet be definitely estimated. The only certain and harmless means of influencing favorably the morbid process consists in systematic massage and expression of the gland. This should be done three times a week for months by a masseur, while urethral injections are made or irrigation is practised. Should these fail, the treatment selected will depend upon whether the process is still infectious or not; namely, whether gonococci are present in the discharge or not. In the former event the treatment by well-known methods should be persisted in until the cocci have disappeared. In the other cases no further treatment may be required at all.—*New York Med. Record.*

MISCELLANEOUS.

Foreign Body in Bronchus.

Removal *per vias naturales*. Schrötter, (Wiener Klinische Wochenschrift,) reported by the Jour. Laryng. Rhinol and Otol, presented a case of a boy of 12 years, who had inspired lead seal. By Röntgen ray examination, it was seen at the level of the fourth rib, on the right side of the sternum. Bronchoscopy was employed at first in vain, but later a white body was seen, which did not move on coughing and completely filled the bronchus in its second division. An instrument was constructed, consisting of a fine pair of toothed forceps, enclosed in a long tube, very slender, and attached to a Schrötter handle. The forceps were introduced open as far as possible under visual guidance, and the foreign body which exceeded the inside diameter of the tube by 3 m.m., was firmly grasped, and removed along with the tube. The sitting lasted, including application of cocaine, about fifteen minutes, and was prolonged by the resistance of the exit angle of the bronchus, and its calibre. Recovery was uninterrupted. The piece of lead was 8 m.m. in diameter.—WISHART.

Puerperal Mastitis.

Brouha (*L'Obstetrique*, v., p. 51, January, 1900) gives details of a healthy primipara who during at least the last three weeks of her pregnancy carried out most conscientiously the prophylactic treatment advised by Rubeska for the prevention of mamillary abrasions and cracks; twice daily she washed the areola and the nipple with warm water and soap, and followed this with a fomentation of the parts, sometimes with alcohol and sometimes with glycerine. The labor supervened at term; the child presented by the breech, but was delivered without interference: but there was some *post-partum* hemorrhage causing considerable anemia. The same night there was some fever and a feeling of tension in the breasts. The infant was only once put to one breast. A mastitis developed, although no lesion could be discovered in the breasts; recovery took place. The author finds it difficult to explain how microbes reached the gland tissue, as the infant had not been put to the breast when the first signs of mastitis appeared. He considers that some of the microbes which are normally found in the lactiferous ducts had forced their way through the epithelium and reached the lymphatics; he thinks that the mechanical and chemical means employed to prevent the occurrence of abrasions may have weakened the vitality of the epithelium, and so made easy the entrance of the microbes and perhaps also have increased the virulence of these microbes.—*Brit. Med. Jour.*

Exploratory Laparotomy under Local Anesthesia for Acute Abdominal Symptoms in Typhoid Fever.

Harvey Cushing, in the *Philadelphia Medical Journal* of March 3, 1900, says that the use of a general anesthetic is one of the most striking contraindications for the employment of surgical measures in suspected intestinal perforation in typhoid. The patient is already reduced by the disease, and the additional strain put upon him by the general anesthetic may be sufficient to turn the scale in favor of a fatal termination. The chief difficulty in dealing with intestinal perforation is the diagnosis. This difficulty has to be met by an exploratory laparotomy, which can be made comparatively safely under local anesthesia. This exposes the patient to little additional danger and may be accomplished painlessly. The conditions which closely simulate perforation are aortic thrombosis, pulmonary complications, appendicular attacks, suppurating mesenteric glands, cholecystitis, and intestinal hemorrhage.—*Medicine*.

Gonorrhoea.

TREATMENT.—Methylene-blue administered internally will cure gonorrhoea in from four to seven days. To the diplococcus, which is the specific cause of this disease, it is especially fatal. The pyogenic bacteria that make gonorrhoea a mixed infection succumb very promptly to this germicide.

It is best given in gelatin capsules in 1-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind. Oil of sandal-wood is a desirable adjuvant because of its diuretic action and also on account of its sedative effect upon inflamed mucous membrane. Recent observations show that, when given internally, methylene-blue reappears unchanged in the urine within two hours. By giving four 1-grain doses of methylene-blue daily there is always enough of it in the urine to kill all the germs it comes in contact with. This is irrigation "from above," irrigation, not of the urethra alone, but of the entire urinary tract. By this method of irrigation there is no danger of forcing the infection into remote recesses of the genito-urinary organs.

Troublesome gastric symptoms sometimes follow the administration of the methylene-blue of the shops, but, with the following formula put up in elastic capsules, uniformly satisfactory results have been personally obtained :—

- R. Methylene-blue, 1 grain.
Oil of nutmeg, 1 drop.
Oil of sandal-wood, 2 drops.

The above formula should not be used for more than ten days without intermission, and while giving it the patient should be instructed to drink freely of water. Joseph Alan O'Neill (Med. Rec., Mar. 24, 1900).

Removal of Foreign Bodies from the Eye.

In the July number of *Annals of Ophthalmology*, Dr. Charles Lukens of Philadelphia writes a very good report on removal of foreign bodies from the eye-ball, citing 18 cases, and summarizes as follows:

(1) In this series of cases the crystalline lens has proved itself to be the most tolerant of a foreign body.

(2) The phagocytic power in healthy eyes was very strong.

(3) The cases have shown that all foreign bodies should be removed from the interior of the globe as quickly as possibly, especially if they are situated near any of the fixed tunics of the eye, as they are very apt to become encysted and apparently to become innocuous for irregular periods of time, and thus missed and allowed to remain until they at some future time, by reason of traumatism, or atrophying processes, are again set loose and excite most disastrous influences upon the organ itself, or even upon its fellow.

(4) They have shown that wherever possible the wound of original entry should be used for the extraction of the foreign body.

(5) They have shown that skiagraphs giving the exact location of the foreign mass, are in the present day of aseptic surgery, absolutely indispensable when the foreign body cannot be seen by the ordinary instruments of precision.

(6) They have shown that cases of doubtful foreign material, in which no obtainable history as to the nature of the object can be obtained, should first be submitted to skiagraphic study, and should the mass prove to be steel or iron, magnets can be safely employed, followed in some cases if required by the use of forceps.

(7) They have shown that particles of other metals, after localization, should always have the attempts made with the forceps for their removal.

(8) They have shown that the presence of copper or stone within the eye gives the most unfavourable results.

(9) They have shown that wounds in the scleral region behind the ciliary zone, although as a rule made by objects of a large size, are primarily, if aseptic, of less danger and damage to the organ than those, although very much smaller, which penetrate and injure the tissues of the anterior segment of the globe.

(10) They have shown that primary treatment, pending operative interference, in uninfected cases, should be palliative and anti-phlogistic, consisting in rest in bed, iced compresses, atropine, boric acid, washes, etc.

These rules hold good no matter to what extent the traumatism has affected the organ, or to what degree the removal of the humors has taken place, as many eye-balls have been saved which have been considered useless by hasty judgment—eye-balls that have proven valuable to their possessors for visual purposes. In addition it may be noted that all traumatisms of the eye, in which there is entrance of a foreign body, the nature of the offending material, its position in the eye, and the condition of the organ, must not only be considered, but the state of the patient's health and his surroundings must be taken into consideration before a prognosis can be given.

C. T.

Carotid Artery Seen Through Membrana Tympani.

Marx, in the proceedings of the Austrian Otological Society, (the Journal of Laryng. Rhinol. and Otol,) reported a case of a girl of 17, with a large heart-shaped perforation of the membrana tympani, through which the carotid artery could be seen as a bluish gray area, pulsating strongly and showing a double punctiform reflection. The pulsation ceased with compression of the carotid.—WISHART.

Is it Justifiable to Use Iodide of Potassium to Aid us in Reaching a Diagnosis of Pulmonary Tuberculosis?

We believe it is a fact which is usually recognized among physicians that iodide of potassium is a drug which is usually to be avoided in the presence of active pulmonary tuberculosis because its administration very frequently leads to the rapid breaking down of the consolidated area and the development of a cavity. Under these circumstances it is usually the endeavor of the physician to at least allay the pathological process sufficiently to permit of the patient resorting to some climate where perchance a cure may be reached. It is also a recognized fact that a cure is more difficult of attainment if the disease has gone on to the process of softening and breaking down with the formation of an excavation than if mere consolidation is present. Our attention has been called to this matter lately not only because we have seen iodide of potassium employed in full doses in one or two cases of pulmonary tuberculosis with the idea that its use was advantageous, but also by an article which has appeared in one of our contemporaries, in the course of which the author states that tuberculosis being suspected, iodide of potassium was given to the patient in considerable doses for a period of eleven days in order to promote expectoration. At the end of this time, expectoration being present, the sputum was examined and was found to contain tubercle bacilli. We do not believe that this use of iodide of potassium is justifiable. It seems to us an instance in which laboratory methods are carried to excess. Surely the physical signs of pulmonary infection are usually sufficiently marked to enable us to make a diagnosis, and in obscure cases we do not believe that the physician is justified in hastening the breaking-down process in the lungs in order to satisfy himself that tubercle bacilli are present in the material which will then be coughed up. The physical signs or the general conditions indicating pulmonary tuberculosis are usually sufficiently marked to enable us to prescribe for the patient satisfactorily without the additional confirmatory evidence presented by the presence of bacilli. The first object of the patient in coming to the physician is, of course, to have a diagnosis made. But after all, his chief reason for consulting a physician, after discovering what is the matter with him, is to find out how he may be cured. We do not think that the institution of any methods designed to aid our diagnosis should be employed which, on the other hand, will hasten the progress of the pathological process and do harm. Certainly the administration of large

doses of iodide of potassium is qualified to produce very deleterious effects in lungs which have areas in them of tubercular consolidation; and even if there is a syphilitic history, we believe that this drug should be administered to patients suffering from pulmonary tuberculosis with the greatest possible precaution, and that its influence should be watched most cautiously from day to day. Should any signs of pulmonary breakdown, as is evidenced by moist râles, develop, it should be immediately stopped.—*Therapeutic Gazette*.

FOR HOARSENESS IN SINGERS AND SPEAKERS.

1. R Cocain hydrochlorid gr. xv.
 Strychninæ sulphat gr. $\frac{1}{4}$
 Aq. dest $\frac{3}{4}$ iiil.
 M. Sig. For spraying throat, 3j and aq. oj.
 2. R Cocain hydrochlorid gr. $\frac{1}{4}$
 Tinct. aconiti ℥ x
 Altheæ }
 Sacchari alb. } aa q. s.
 M. Ft. pastilli No. LXXX. Sig. Dissolve in mouth.

FOR INFANTILE ANGINA.

- R Ac carbolici gr. xv.
 Glycerini $\frac{3}{4}$ iss.
 Ol. thymi gtt. ii.
 Aquæ Oi.
 M. Sig. For irrigation of pharynx.

HOLLOWAY'S OINTMENT.

The formula for this preparation is said to be:

Take of—

Yellow wax	10 parts.
White wax	10 "
Turpentine	25 "
Lard	50 "
Sweet oil	75 "

Mix.

HOP BITTERS.

The following is said to be the formula:

Take of—

Tinct. of hops	$\frac{1}{2}$ oz.
Tinct. of Buchu	$\frac{3}{4}$ drs.
Tinct. of senega	3 drs.
Podophyllin (dissolved in spirits of wine)	2 grs.
Tinct. of cochineal	20 drops.
Distilled water sufficient to make one pint.	

Mix.

—*Med. Times and Hosp. Gaz.*

HOLLOWAY'S PILLS.

Take of—

Aloes.....	2 dr.
Rhubarb.....	1 dr.
Capsicum.....	20 grs.
Saffron.....	5 grs.
Sulphate of soda.....	5 grs.

Make one hundred pills.

ACUTE RHEUMATISM IN CHILDREN.

R. Sodii salicylatis.....	dr. iss.
Potassii iodidi.....	dr. ss.
Tinct. aconiti.....	gtt. x-xv.
Aquae.....	oz. ij.

M. Sig.—One dram, t. i. d.—CAILLE.

—*Medical Record.*

BLADDER IRRITABILITY AFTER DELIVERY:

R. Salol.	
Tr. hyoseyam. āā....	8 | (āā 3ij).
Inf. buchu.....	180 | (v. s. ad. f. 3vi.)

M. S. Teaspoonful three times a day.—FOTHERGILL (*Ibid.*)

WAFERS FOR AMENORRHEA.—The *Gazette hebdomadaire de médecine et de chirurgie* for April 1st attributes the following formula to H. C. Bloom:

R Strychnine sulphate	2 grains;	
Oxalic acid	9 “	
Iron peptonate,	} each	2 drachms;
Manganese lactate,		
Compound extract of colocynth	30 grains.	

M. Divide into sixty wafers.

S. One to be taken an hour after each of the principal meals.—

N.Y. Med. Jour.

PRESCRIPTION FOR MENSTRUAL PAIN.—*Les Nouveaux Remèdes* of February 8, 1900, gives the following prescription:

Codeine.....	1 grain;
Chloral.....	15 grains;
Bromide of ammonium.....	15 “
Camphor water.....	1 ounce.

One-quarter to one-half of this preparation may be given before retiring at night.

TREATMENT OF HEMORRHOIDS WITH CHRYSAROBIN.—After disinfection of the part by means of creolin or carbolic acid solutions the following formulas may be used:

Chrysarobin.....	12 grains;
Iodoform.....	5 “
Extract of belladonna.....	8 “
Vaselin.....	1 ounce.

Or a suppository as follows :

Chrysarobin	1 grain ;
Iodoform	$\frac{1}{2}$ "
Extract of belladonna	$\frac{1}{8}$ "
Cocoa butter	30 grains ;

After these applications have been used for a few days the pain of the hemorrhoids usually disappears, and if the applications are persisted in, at the end of three to five months the hemorrhoids are shriveled in many cases.—*Journal de Médecine de Paris*, Feb. 11, 1900.

NEW METHOD OF ESTIMATING RENAL PERMEABILITY.—Simonelli (*Centralblatt f. Chirurgie*, No 1900) commends potassium iodide, given in gelatin capsules with a moderate quantity of water, as a means of estimating kidney permeability. Normally iodine is eliminated in both the urine and saliva within the first half-hour and continues for some time. In cases of nephritis, the iodine is not detected for from five to twenty hours, is passed in less quantity somewhat irregularly, and its elimination is not so long continued. Its presence is determined by the ordinary starch paper test.—*Therapeutic Gazette*.

FOR INSECT STINGS.—The *Journal des praticiens* for May 19th ascribes to Bernbeck the two following formulæ :

1. R Flexile collodion..... 10 parts;
Salicylic acid 1 part.

M.

2. R Flexile collodion 100 parts;
Corrosive sublimate 1 part.

M. For local application.

These two applications are said by the author to give excellent results, and to be preferable to ammonia as at present employed. If applied promptly after the sting, pain is allayed, and subsequent inflammation is said to be rare.

FOR COUGH OF PHTHISIS.—The following combination, recommended by Murrell, is useful for the hacking, irritable cough of phthisis :

- R Codein..... 4 gr.
Dilute hydrochloric acid $\frac{1}{2}$ dr.
Spirits of chloroform $1\frac{1}{2}$ dr.
Syrup of lemon..... 1 ounce.
Water to make 4 ounces.

Make an emulsion. A teaspoonful frequently when cough is troublesome.

FOR AMENORRHEA.—According to the *Therapeutic Gazette* Lutand has found the following combination useful in amenorrhea when there is debility and anemia :—

- | | | |
|------------------------|----------------|--------|
| R Bichlorid of mercury | } of each..... | 1 gr. |
| Sodium arsenate | | |
| Strychniæ sulphate | | |
| Potassium carbonate | } of each..... | 30 gr. |
| Iron sulphate | | |

Make into sixty pills, and give one after each meal

CHRONIC ECZEMA.—A confrère asserts that he obtains the radical cure of eczema where it occurs in isolated patches on the upper extremities and so rebellious to the ordinary method of treatment, as follows: After having washed thoroughly with soap and water the part and dried it, he rubs in vigorously a 50-per-cent. solution of caustic potash by means of a plug of cotton tied to a rod; he then washes the spot freely with water, and, finally, paints it over with a 50-per-cent. solution of nitrate of silver, and envelops the whole in aseptic cotton. This dressing is left in place until the cicatrix is formed beneath the slough, or from one to two weeks. The itching ceases immediately after the application of the caustics. Out of thirty cases thus treated, only one required the operation a second time.—*Med. Press and Circular*.

LEMONADE FOR DIABETICS.—The following is said to be useful for assuaging the thirst of diabetics:—

R Citric acid	1 grm
Glycerine }	
Cognac }	.....āā 50 "
Distilled water	500 grm

ANAPHRODISIAC.

R Lupulin 10 gm.
For ten powders. S. Take one at bedtime.—*Med. Times and Hosp. Gaz.*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion : Established 1867.

Published on the 15th of each Month.

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All Communications in reference to the Literary part of the Journal, articles for publication, etc., address The Editor, 241 Wellesley Street, Toronto. Correspondence in reference to Advertising, Subscriptions, Publishers Department, etc., address Dr. G. P. Sylvester Business Manager.

Make Cheques and Drafts payable to the Business Manager.

EDITORIAL.

CEREBRAL EXERCISE IN THE TREATMENT OF NERVOUS DISEASES.

For the relief of the distressing motor disturbances which characterize certain nervous diseases, as the inco-ordination of tabes dorsalis, the tremors and rigidity of paralysis agitans, the spasms or twitching of chorea or convulsive tic, a German physician, Frenkel, has proposed a system of treatment for the re-education of the muscles, in which the movements have become disorderly or uncontrollable. While not aiming to remedy the morbid condition in these diseases, the treatment seeks by relieving the most marked and troublesome symptoms to make the patient's existence endurable. The physiological reasons on which the treatment is based are stated by the author in the following words:

"It is a fundamental property of all nerve substance to retain some trace of every influence acting upon it. When the same functional process is frequently repeated, the nervous apparatus undergoes a lasting change, which in the domain of association of ideas is manifested by the phenomena of memory, and in the sphere of motor functions permits of readily executing co-ordinate movements. This accounts for the physio-

logical rôle of habit, education, training and exercise, by means of which we learn to execute more or less automatically a large number of most complicated muscular movements, forming the basis of our animal life and of professional skill.

"The mental or psycho-motor element obviously plays an important part in the production of these co-ordinate movements. It implies idea or representation of the object aimed at by certain muscular contractions, effort of will required for their execution, and consciousness of the movement executed.

"It is self-evident, without entering into an elaborate discussion of this subject, that the same exercises which serve for the physiological education, so to speak, of our motor functions, may also be utilized for the therapeutical re-education in cases of motor disturbances, supervening in the course of various nervous diseases. This re-education is greatly facilitated by the functional substitution, in case of necessity, of various centres and cells of the nervous system for others."—(*Medical Press and Circular.*)

In Frenkel's system of "cerebral gymnastics" an attempt is made to resolve the ataxic movements into their component parts by substituting therefor simple rhythmic voluntary actions. The affected muscles are subjected to graduated systematic exercises, involving movements of increasing complexity, so soon as the simpler ones are properly performed. In this way, by a process of compensation, new nervous tracts are trained to carry the impulses and so to assume the functions of the diseased portions. Thus, in locomotor ataxia such exercises as walking in a straight line, circumduction of the foot in a circle, picking objects from the floor, designing geometrical figures, or other exercises with especial apparatus, suited to the particular case, are adopted. In order that satisfactory results may be expected, it is necessary that the sub-cortical and spinal paths of transmission be intact, so that in such diseases as myelitis, disseminate sclerosis, spastic paraplegia, and other similar conditions where these tracts are involved, not only is no improvement brought about, but the author cautions that harm may follow from the treatment. In properly selected cases the results obtained by Frenkel as well as others who have tried his methods, if we may credit reported cases, have been very encouraging, in many instances practically overcoming the motor disturbances and in others producing considerable relief. When we consider how unsatisfactory all lines of treatment heretofore proposed in these diseases have been, Frenkel's system, founded as it apparently is on a rational basis, is worthy of careful trial at the hands of the profession.

EDITORIAL NOTES.

Treatment of Hay Fever.

Dr Robertson, of Cincinnati, (The Medical Council), thinks that as the irritant which produces this disease is necessarily in a very attenuated condition, possibly gaseous—he suggests a deficiency of ozone or an excess of carbon dioxide—that it is useless to attempt to counteract its effects or to soothe the irritated Schneiderian membrane by sprays or washes. The parts are quite inaccessible to these means but he thinks success might be attained by applying the medication by means of a nebulizer so that the finely comminuted, or gaseous irritant, may be searched out and neutralized by an equally diffusible remedy.

As a basis for successful treatment he mentions four facts which must be considered in each case.

1. There is a constitutional idiosyncrasy.

2. There is an exciting cause.

3. The constitutional idiosyncrasy and the exciting cause must act together to produce the disease. It does not result from either acting alone.

4. If we can either correct the constitutional idiosyncrasy or counteract the exciting cause we will thus master the disease.

Treatment must therefore be both local and constitutional and in carrying it out one must take cognizance of the peculiarities of the individual case. He gives the following formulæ as applicable to the treatment of different phases of the malady:—

R—Zinc Sulphategrs. xv. to ʒss.

Aqua dest.fʒvj.

In ordinary cases with watery discharge.

R—Tannic acidʒss.

Aqua dest.fʒviiij.

Where there is a profuse watery discharge.

R—Morph. Sulph.grs. iv.

Atropia Sulph.grs. iiij.

Zinc Sulph.ʒss.

Aqua Camphoræfʒviiij.

Where there is a copious watery discharge with much pain and tenderness.

R—Acid Carbolic ʒss.

Tr. Iodine Comp. fʒss.

Aqua dest fʒvj.

Where there is a fetid or purulent discharge.

R—Acid Sulphurosum fʒiv. to fʒj.

Aqua dest fʒiv.

In some cases a much stronger solution of the sulphurous acid may be used. It is especially useful where bacterial or fermentative processes are suspected.

After using the spray, apply the following in the form of nebulous vapor by means of the comminuter for temporary relief. It will reduce the turgescence, clear the passages and relieve the pain :

R—Cocaine (pure alkaloid) grs. viij.

Menthol,

Camphor, aa grs. xx.

Ol. Cloves (buds) mxxij.

Hydrocarbol fʒij.

Now for more permanent but less immediate effect, administer by means of a comminuter one of the following prescriptions.

R—Zinc Sulphate grs. xxx.

Beechwood Creosote fʒss.

Glycerine fʒiss.

Aqua dest. q. s. fʒiij.

R—Quinine Hydrobromate ʒss.

Iodine (crystals) grs. x.

Acid Carbolic ʒss.

Alcohol fʒiv.

Glycerine q. s. fʒij.

R—Aspidospermine grs. xv.

Alcohol,

Aqua, aa fʒiv.

Glycerine q. s. fʒij.

R—Tannic Acid ʒss.

Glycerine fʒj.

Aqua dest. q. s. fʒij;

R—Salol,

Chloral hydrate,

Menthol,

Camphor, aa grs. xv.

Ol. Cloves (buds) mx.

Hydrocarbol q. s. fʒij.

Cost of a Medical Education in Great Britain.

According to the *British Medical Journal*, the cost for a student to qualify for the Conjoint Board at a London school is from \$3,250 to \$3,500; or if he proceed to a University degree as much as \$7,000. A perpetual ticket for tuition fees at a London school varies from \$500 to \$750. This of course, does not include the private coaching in different subjects which is commonly found necessary in preparation for examinations. As to the prospect of the newly qualified practitioner, the medical services of the Army and Navy or the Indian service are open to him. If he accept an assistantship with a successful practitioner, he may receive from \$500 to \$750 a year with the prospect of rising to \$1,000 or \$1,250. The *Journal* concludes by stating that the practitioners' services have a definite money value which ought, in the course of years, to give him a fair interest on the capital expended on his education, and, if he be at all successful, by degrees, the return of the capital itself. This is certainly not a prospect to appeal to the imagination of the youth bent on acquiring wealth.

Urotropin in Posterior Urethritis

Gerald Dalton (*The Therapist*) highly commends this remedy in the above named affection. In several of his cases a complete cure was obtained and in none did it fail to produce improvement. He administers 7 grains thrice daily. It is also useful in cystitis and as a uric acid solvent.

W. B. Saunders & Co.'s London Branch.

We are pleased to note that this enterprising publishing house are extending their business by opening a branch in London, England, for the purpose of increasing their business with Great Britain and her colonies. We have no doubt that the same methods that have contributed to the phenomenal success of this company in America, will meet with equal favor across the Atlantic.

Exophthalmic-goitre.

Dr. W. H. Harland (*B. M. J.*, Sept. 1st) reports two cases of exophthalmic goitre with all the characteristic symptoms of the disease, developing suddenly in soldiers after being in action. During the two weeks they were under his observation, no benefit was gotten from treatment. The cases are of interest as confirmatory of the nervous origin of the malady.

Etiology of Dysentery.

In the section on the Practice of Medicine of the American Medical Association, Prof. Simon Flexner read a paper on the results of his investigation of dysentery in the army hospitals at Manila. Tropical dysentery, he concludes, occurs in at least two forms—one due to the amoeba coli, and the other to the bacillus dysenteriae of Shiga.

The latter disease lasts usually 6 or 8 days but may become chronic, and secondary lesions in lungs or liver are rare. The blood serum of patients suffering from the disease produces agglutination of the bacillus.

Santonin in the Treatment of Epilepsy.

Dr. G. F. Lydston (*Therapeutic Gazette*), as the result of his experience with the remedy, prefers santonin to the bromides in the treatment of epilepsy. He claims that the results are better, that santonin acts well in cases where bromides entirely fail or are not tolerated, and that its use is not followed by drowsiness, mental depression or melancholia, conditions not infrequently attributed to the bromide treatment. He gives the drug in doses gradually increased to 15 grains three or four times daily. At times it may advantageously be given in conjunction with the bromides, the latter being administered at bedtime.

A Highly Qualified Doctor.

At the recent meeting of the British Medical Association in Ipswich His Royal Highness, the Prince of Wales, was elected an honorary member of the Association. The Prince had previously been elected to the honorary Fellowship of both the Royal College of Physicians and the Royal College of Surgeons.

Protargol in Eye Affections.

Dr. Sydney Stephenson, (*Edinburgh Medical Journal*) in an article on "The place of Protargol in Eye Work," says in blepharitis he uses 10 per cent. ointment in equal parts of vaseline and lanolin in the eczematous type, a rapid cure following. In conjunctivitis, due to gonococci the results are better than with any silver salt previously used; using 50 per cent. twice daily in severe cases, and that corneal complications are a special indication for the use of this strong solution. In acute muco-purulent conjunctivitis he used a 10 to 20 per cent. solution to paint the part. In dacryocystitis, protargol is the best remedy the author has found. He washes out the sac with a 5 to 10 per cent. solution.—(C. T.)

Lancet Index.

The index for Volume XXIII. of the Canada Lancet, which was completed with the August number, will appear as a separate pamphlet with the October number of the journal.

Toronto Clinical Society.

The first meeting of the Society for the coming session will be held on Wednesday evening, October 10th. The president, Dr. W. H. B. Aikens, and the executive committee are exerting themselves to make the coming a record year in the history of the Society.

Death of Dr. Mennie.

Dr. J. G. Mennie, of Bathurst St., Toronto, died of Bright's disease on August 23rd at his father's residence, Fergus. The deceased, who was 46 years of age and a graduate of Toronto University, was well and favorably known in the city, and his early death is a cause of extreme regret.

Army Medical Dinner.

The officers, non-commissioned officers and men of No. 4 Bearer Co. Toronto, dined at the Temple Café on Friday evening, September 14th. Col. Neillson, Director General of the Army Medical Service, and the officers commanding the different city battalions, were among the invited guests.

PERSONAL.

Dr. H. O. Simpson (Trin. '98), has opened an office on King St. East.

Dr. J. K. M. Gordon, of Ripley, spent a short holiday with friends in Toronto.

Dr. Allan Baines, Simcoe St., has returned from Europe and resumed practice.

Dr. J. A. Amyot has returned after spending a month in the public health laboratory in Boston.

Dr. J. L. Bradley, of Creemore, returns to Canada in September, after spending the summer in Europe.

Dr. Harry J. Watson (Trinity, '95), of Ottumwa, Iowa, has been appointed Surgeon to the U. S. army in China.

Dr. A. G. Scott, of Rosedale, returned from Muskoka last week, suffering from a mild attack of typhoid fever.

Dr. Thos. B Fletcher (Tor. '93) assistant in Medicine Johns Hopkins Hospital, is spending a holiday with friends in Ontario.

Dr. T. J. Norman, formerly of King, has returned from Europe, and begins practice in Toronto, opening an office on Bloor St.

Dr. J. A. Sutherland (Trinity, '97), of Dawson City, returned home August 17th, after a holiday spent with his friends in Toronto.

Dr. Chas. O'Reilly, Superintendent of the General Hospital, has returned from a holiday in Detroit and Buffalo, and other American cities.

Dr. Haig, of Hamilton, has been appointed Superintendent of the Kingston General Hospital, in place of Dr. Jas. Third, who resigned the post.

T. H. Middlebro', F.R.C.S., of Owen Sound, has returned home after spending a year and a half in England and on the continent in post graduate work.

Dr. Frederick Steele, of Gravenhurst, formerly house physician in the Hospital for Sick Children, was married on August 29 to Miss Spence, of McCaul St., Toronto.

Dr. F. W. Marlow (Trinity, '00), resident assistant at St. Michael's Hospital, has been suffering from an attack of pleurisy, necessitating his absence from duty for a time.

Dr. Norman Macleod Harris (Tor. '96) assistant in Pathology Johns Hopkins Medical School, who has been visiting his family in Toronto, returned to Baltimore on Sept. 3rd.

Dr. Frederick Fenton, lecturer on histology, Trinity Medical College, and one of our associate editors, was married on August 21st to Miss Mary Irving of Sherbourne St. On their return from a honeymoon in the Maritime provinces and the eastern states, they will take up their residence on Charles St.

Dr. D. N. MacLennan (Queens '92), who has been abroad since his graduation, returns to Canada to begin practice this fall. Dr. MacLennan was resident assistant in Moorefield's Eye and Ear Infirmary for some years, and during the past year has held a similar post in the Throat Hospital, Golden Square, London.

The LANCET offers its congratulations to Dr. James H. Richardson and Mrs Richardson of Toronto, on the celebration of their golden wedding on August 20th. During the afternoon hundreds of the old professor's former students and other intimate friends called to pay their respects and to offer their good wishes to the esteemed couple.

Of the members of the resident Medical Staff Toronto General Hospital, 1899-1900, Dr. G. A. Schmidt has opened an office in Sudbury, Dr. H. W. Spence has gone to Europe, Dr. F. D. Turnbull has commenced practice with his brother, Dr. J. L. Turnbull, of Goderich; Dr. C. A. Page goes to New York to spend a year in post graduate work, and Dr. R. S. Broad has opened an office in Barrie.

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The Essential Elements of the Animal Organization—
Potash and Lime ;

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It differs in its effects from all Analogous Preparations : and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt : It stimulates the appetite and the digestion ; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

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BOOK REVIEWS.

A Text Book of Practical Medicine.—By Wm. Gilman Thompson, M.D., Professor of Medicine in Cornell University Medical College, New York, Physician to the Presbyterian and Bellevue Hospitals, New York. Illustrated with 79 engravings. Cloth, \$5.00. Lea Bro's & Co., New York and Philadelphia.

This volume contains 1,010 pages, divided into nine parts, covering the whole field of medical practice at the present day. In a limited space it is impossible to review in detail the various subjects dealt with. The author strikes the proper key-note for a text book adapted to the needs of students and practitioners when he says in the preface "that curative medicine is assumed to be the final and avowed object of those who may read this volume," a matter too much lost sight of in many recent publications in medicine. The profession will be glad to welcome this return from the ultra scientific, unpractical disquisitions of continental writers, in which treatment of disease has frequently been ignored or at least dealt with as of secondary importance, to plain, practical, Anglo-Saxon common sense.

The author has not neglected the latest discoveries in clinical microscopy, pathology and bacteriology, where these are of practical interest. The discussion of the pathology of individual diseases has received careful attention and in most cases is accurate and up to date, though we do not hesitate to say that the book will be of more value from its practical than from its purely scientific aspect.

The literary character of the work is open to criticism at times, making the reading difficult, and frequently the meaning is obscure. On page 18 he speaks of "a disastrous epidemic, *causing* more than 1,900 cases," evidently a want of care in the selection of the proper word to express his meaning.

The press work is very good. Altogether the book well represents the latest teaching in modern medicine, is essentially practical and we believe will be well received by the profession.

Books.

W. B. Saunders & Co. announce that they will issue shortly "The American Illustrated Medical Dictionary," edited by W. A. N. Dorland. The price will be \$4.50 net.

THE CANADA LANCET

VOL. XXXIV.

TORONTO, OCTOBER, 1900.

No. 2.

ORIGINAL ARTICLES.

A CASE OF COLLOID GOITRE, INVOLVING THE MIDDLE LOBE OF THE THYROID GLAND. ASSOCIATED WITH ASTHMATIC ATTACKS AND RESULTING IN SUDDEN DEATH.*

H. B. ANDERSON, M.D., L.R.C.P., M.R.C.S.,

Professor of Pathology, Trinity Medical College, Physician to St. Michael's Hospital, Hospital for Sick Children, etc.

Mrs. M., aged 51; patient had suffered from goitre for some seven years which had occasioned her a great deal of discomfort. The tumor was enlarging more rapidly of late. The ordinary means of treatment had been tried without success, when she was referred to the clinic of Dr. C. R. Dickson, Electrician to the Toronto General Hospital, on Wednesday March 10th, 1897. He examined and found her a suitable case for electrical treatment. Measurement showed the circumference of the neck at the upper part of the goitre to be $13\frac{1}{2}$ inches, at the middle $15\frac{3}{4}$ inches and at the lower part $15\frac{1}{2}$ inches. The goitre itself measured six inches transversely and four inches from above downwards, the prominence occupying the median line of the neck, the sides not being involved. Patient had one sister affected with goitre.

She was ordered to return to the hospital for treatment the following Friday, March 12th, which she did. The neck was prepared for operation in the usual manner, during which time she was telling the doctor the history of her case. A short superficial incision was made in the median line of the neck, a trochar and cannula were introduced about $\frac{1}{2}$ of an inch. The trochar was then removed, about a dram of thin serous-like fluid withdrawn and an equal amount of normal saline solution slowly injected, without discomfort. The cannula was left in position and the current from a voltaic battery, less than 20 milli amperes turned on. The patient was telling about previous attacks of dyspnoea from which she had suffered. On one occasion about 18 months before she had an attack during which she became livid and thought she would choke. This lasted for some hours. It was on account of difficulty in breathing and fear of a recurrence of these attacks that treatment was sought. While speaking, she was suddenly seized with spasmodic cough

* Read before the Toronto Clinical Society.

and cried out that she was choking. Respiration became gasping and stridorous with lividity of the face. The current was immediately stopped. She was placed on the operating table and all the recognized measures for resuscitation were applied. She continued to breathe for some moments though the radial pulse was gone and the pulsations of the heart were imperceptible to the stethoscope. Artificial respiration, Fell's forced respiration apparatus, etc., were tried for some time but without avail.

Necropsy, March 13th, 15 hours after death. The body was that of a fairly well developed and well nourished woman about 50 years of age, 5 feet, 4 inches in height and weighing 155 pounds. Postmortem staining was well marked on the dependent parts of the body. Rigor mortis very firm. No evidence of putrefaction. Some dark-colored, dry, blood was present in the left nostril. There was a marked prominence in the median line of the neck, extending from the upper margin of the sternum below, upwards for three inches. Transversely it extended outward under cover of the sterno-mastoids on either side, measuring $4\frac{1}{2}$ inches, the greatest prominence being in the middle line. The tumor was soft and semi-fluctuating. In its centre was a small operation wound which admitted a probe without resistance, $\frac{3}{8}$ inch in depth. No important vessels were found on dissection in the line of puncture; the sterno-hyoid and sterno-thyroid muscles were much hypertrophied, forming very prominent muscular bands over the surface of the tumour. On exposing the tumour it was found to consist of the enlarged isthmus of the thyroid gland. It was of a dark reddish color. On incision a considerable quantity of dark, reddish-colored, semi-gelatinous fluid escaped. The mass contained larger and smaller cystic cavities. There were some dark-colored blood clots and evidence of previous hæmorrhage into it. Behind the goitre the trachea was considerably flattened, but the passage was not occluded and when relieved of pressure assumed its normal appearance. The enlarged middle lobe of the thyroid had pressed the lateral lobes outwards beneath the sterno-mastoid muscles, so displacing the structures in the carotid sheath. The veins of the neck showed extreme distension, being quite as large as one's thumb. The larynx was normal in appearance. The trachea contained some reddish-colored, frothy mucus and the mucous membrane was congested. Right lung weighted 18 oz.; left lung $19\frac{1}{2}$ oz. Both lungs and pleural cavities were normal except slight hypostatic congestion at the bases. The heart weighed $7\frac{1}{2}$ oz.; right side was full of dark fluid blood; left side was contracted and empty. The heart muscle was firm and of a brownish-red color. Tricuspid orifice was enlarged so as to admit four fingers, the other orifices and the valves were normal. The coronary arteries were normal and free from atheroma.

Abdominal cavity. The organs generally were dark in color and congested. The left kidney slightly rough and capsule adherent. Otherwise the abdominal organs gave no gross evidence of disease. The inferior vena cava was distended with blood. Abdominal aorta showed atheroma.

Brain. Weight, 49 oz. Showed congestion of its membranes.

Microscopic examination of the goitre showed it to be composed of vesicles, irregular in size and shape, lined with epithelium, which in places showed evidence of rapid proliferation, almost suggesting malignancy.

nancy. This, however, was merely the appearance of the actively secreting glandular tissue. The vesicles were filled with colloid material and contained epithelial cells in various stages of colloid degeneration. The tissue was exceedingly vascular, the vessels being engorged with blood, and at places there were quite extensive irregular haemorrhages.

The post mortem examination pointed to *asphyxia* as the cause of death, as shown by the engorgement of the right side of the heart and general venous system, viscera and membranes of the brain, with blood exuding from the nostrils, and blood-stained, frothy mucus in the trachea. This may appear to contradict the statement previously made, that *respiration* continued after the pulse and heart's action ceased, but they were doubtless futile respiratory efforts trying to get air past the obstruction caused by the goitre.

This explanation is in accord with the clinical signs. The fatal attack came on with spasmodic cough, gasping, stridorous respiration, followed by lividity and cyanosis. There was evidently increased pressure upon, and irritation of, the recurrent laryngeal nerve, with spasm of the glottis and consequent asphyxia. We know that goitres are prone to undergo such rapid increase in size from vascular engorgement, or in some cases, from haemorrhages into the gland, accompanied by symptoms from the increased pressure produced.

The very small heart in this case, $7\frac{1}{2}$ oz., though the women weighed 155 lbs., is a point of interest. An abnormal heart is said to be present in fully half the cases of goitre. Schranz in autopsies on 308 goitrous subjects found heart trouble in 67%. The functional involvement of the heart in cases of exophthalmic goitre and the cardiac symptoms produced by overdoses of thyroid extract are also suggestive in the same connection.

This case might be profitably considered from three points of view.—

1st. Goitre involving the *isthmus* of the thyroid gland only.

2nd. Goitre as a cause of dyspnoea, resembling and sometimes mistaken for asthma.

3rd. Goitre as a cause of sudden death.

First, judging from the literature on the subject, goitre limited to the *thyroid isthmus* would appear to be very rare. In fact I have been unable to find any case recorded. Involvements of the isthmus with coincident involvement of either one or both the lateral lobes is common enough. Osler says that it may occur affecting the isthmus alone, without giving any references.

Prof. Adami has recently had a case of enlargement of the middle lobe, with periodical attacks of dyspnoea, extending over eight years, and eventually death resulting from pressure on the trachea, the passage being reduced to a mere slit. I think it is quite probable, however, that the condition involving the isthmus alone occurs more frequently than a research into literature would indicate.

Second, the occurrence of periodical attacks of the most urgent dyspnoea—constituting the so called "thyroid asthma" is by no means of rare occurrence. It occurs earlier and is more urgent and dangerous to life when the enlargement is limited to, or affects chiefly the middle lobe.

Retrosternal goitres, small though they may be, are particularly liable to produce the most distressing dyspnoea. The dyspnoea is usually explained as being due to the direct pressure of the goitrous tumor on the trachea or to irritation of the recurrent laryngeal nerve. The periodical character of the attacks is due to the tendency to rapid increase in size of the gland at certain times from vascular changes, before spoken of.

It would appear that these cases of thyroid dyspnoea are not infrequently mistaken for true asthma, especially where the neck is short and fat and the goitre is smooth and regular in outline; or when it involves the isthmus or is retrosternal. This should be borne in mind in obscure cases of dyspnoea.

Third, death may result during these attacks of dyspnoea and often suddenly. It occurs from various causes—direct pressure on the trachea, on the recurrent laryngeal nerve with spasm of the glottis, from pressure on the vagus nerve and stoppage of the heart or from pressure in the cervical veins, with consequent cerebral congestion. Treatment during the attacks—usually by division of the isthmus or by tracheotomy is attended by a high mortality.

The possibility of a goitre producing sudden death is important from a medico-legal point of view, though I have never seen it stated among the causes

THE ALKALOIDS.*

By LLEWELLYN B. ASHTON, M.D., C.M., Phm. B.

Perhaps none of the organic compounds possess greater interest to the therapist than the alkaloids, in the display of their effects in treatment, especially on the nervous system which they so profoundly impress.

The attractions too which these vegetable products hold for the working chemist of to-day is easily accounted for, composing as they do so very small a proportion of the plants in which they are found, yet representing in many cases their whole virtue and activity as remedial agents. It is quite natural then that their composition should be carefully studied with a view to explaining the changes by which they are produced in Nature and, if possible, to imitate those processes in order to reproduce these valuable agents by artificial means. So we find Fischer (Berlin 1895) building up caffeine from urea; Königs plodding along steadily on quinine; Knorr, of antipyrine fame, working away on morphine; Petit on eserine, and many more, each on his own hobby.

In 1804, Sertürner, a German apothecary, demonstrated an active principle in opium. His experiments extending over a period of eleven years, when he isolated morphine, learned its characteristics and differentiated it from narcotine. This constitutes the first knowledge on record of this class of proximate principles. For this attainment the Institute de France granted him a prize of two thousand francs.

As to their occurrence: the alkaloid is found forming in all parts of the plant to which it is native—except the growing wood or stem, being

* Read before the Medical Society of Trinity Medical College, Toronto.

accumulated in those parts destined sooner or later to become detached from the parent stem, *i.e.*, bark, fruit, seeds and root cortex.

They are the nitrogenous products of retrograde metabolism, probably purely waste material. They may be even injurious to the plants producing them. The poppy, for example, can be poisoned by a hypodermic injection of its alkaloid, morphine—auto-intoxication, if you like. They would seem then to be of no service to the plant, except, may be, in the economy of Nature to protect them from the ravages of predatory animals or parasitic organisms.

In the cinchona plantations, instituted by the British government in India, it was found on experimenting that although the same vegetable zone and altitude were secured as the tree enjoyed in its native forests of Peru, the conditions of constant moisture, due to the daily rain and fogs there had to be imitated by artificial "mossing" by covering the bark with moss or cotton wool wrapped around the trunk, before an equal yield of quinine could be produced. This would seem to confirm the theory that its formation might be due to some anti-parasitic effort, stimulated by the micro-organisms which thrive under these conditions of combined moisture and heat with absence of sunlight.

About two thirds of the alkaloid-producing plants which have been studied are poisonous, the remainder being simple bitters.

Besides these bases found in the vegetable kingdom, substances answering to many of the alkaloidal tests are produced in the putrefaction of dead animal tissues, as is frequently seen in canned meats, fish and the tyrotoxon of ice cream. These constitute the cadaveric alkaloids or ptomaines; while the breaking down waste of living albuminous matter forms another class known as Leucomaines, of which urea may be taken as a type. In passing, too, it might be said that many of the highly complex organic compounds, notably the coal tar derivations, which form so large a part of the *materia medica* of to-day, should be classified as the artificial or synthetic alkaloids, their relation chemically and physiologically being so closely allied.

Physically, the natural alkaloids occur either as non-volatile solids or as volatile liquids; all containing the elements carbon, hydrogen and nitrogen. The solids, which are much the greater number form, with few exceptions, as white crystals and contain oxygen in addition to the elements already named. Chemically, they may be considered to be compound ammonias, *i.e.*, NH_3 in which one or more of the hydrogen atoms has been replaced by a hydro-carbon or by an acid radicle. If by a hydro carbon radicle they are classified as amines; while if by an oxygenated radicle they are then known as amides. To the latter the solid crystallizable salts belong.

The name *alkaloid* would suggest some likeness to the alkalies in their general properties and in the laboratory we find this to be true. Their solutions turn red litmus blue; they combine with acids to form salts,—in doing so, however, they do not replace the basylous hydrogen in the acid, but behave like NH_3 , forming a hydro acid salt. They differ from the alkalies and alkaline earths in that they do not saponify the

fats, and that they are destroyed by heat. When subjected to destructive distillation they evolve an ammoniacal odor.

As has already been noticed the molecular structure of the members of this group is very high and as the more complex a compound is the more unstable it becomes, we find the alkaloidal solutions of the pharmacopœia are very prone to decompose, even under the influence of so lowly a form of organic force as the penicillium—one of the fungi or moulds—the hyphæ of which may be frequently seen forming in a solution that has been kept standing beyond a limited time, looking like so much cotton wool. This vegetable growth thrives at the expense of the salt contained, from which it is able to abstract certain elements—similar to the action of the yeasts on sugar—so as to completely alter its composition and render it inert or even irritating. The only safe procedure then would seem to be to have all such solutions freshly made as required.

It is now well known that the alkaloids do not exist naturally in a free state, but as neutral or acid salts, combined with the plant acids peculiar to their source—as meconic acid in opium; igasuric in nuxvomica; kinic or cincho-tannic in cinchona; tannic in coffee, etc.—these compounds being termed the native salts. The free alkaloids are nearly all insoluble in water, but easily dissolved by chloroform, ether, ethylic and amyllic alcohols, benzol and benzine; while their salts are mostly water soluble, but insoluble in the solvents for free alkaloids.

Their salts are also precipitated from solution on the addition of an alkali. These facts then give a key to their isolation and it was by taking advantage of this that Sertürner reached his results in his early work and which still obtains to-day, now known as the “shaking out” process. It may be facilitated by the use of a glass bulbed separator with ground stop-cock and cork. The steps may be simple or more complex according as the associated constituents or plant extractives are soluble or not in the alkaloidal solvent, and so complicate the work; but the freed alkaloid may be readily run down by extending these principles a little. When it happens that two or more alkaloids exist in the one plant their separation may sometimes be accomplished by the differing solubilities of their salts, as in quinine from its many closely related fellows in the bark, or by the finding of a solvent for one not common to both, as in opium by treating first with ether which dissolves out the narcotine but not the morphine.

In order to determine the presence of an alkaloid in a given drug, a good working plan is to first macerate a ground sample for several hours in a stoppered bottle with about ten times its weight of Prollin's Fluid, shaking frequently. This is a liquid with remarkable penetrating power on the vegetable cell wall, and also an active solvent for the liberated alkaloid. It is composed of ether 325, alcohol 25 and strong solution of ammonia 10 parts. When this has been done, decant the clear liquor and agitate in a glass separator with a five per cent. solution of sulphuric acid, the acid sulphate being thus formed and held in solution in the lower aqueous layer. Separate the two layers and warm the acid solution to drive off any dissolved alcohol or ether. If any alkaloid is present, a cloudiness or precipitate will be shown on adding any of the general reagents for this class of proximate principles.

Of these, Mayer's solution, which is a double iodide of mercury and potassium will answer or tannic acid, forming insoluble tannates—(thus indicated in all cases of alkaloidal poisoning if quickly removed from the stomach); the hydrates and carbonates of the alkalies and alkaline earths, certain metallic salts, as mercuric chloride and lead acetate, iodine, iodides and bromides—all cases of chemical incompatibility, which facts have to be ever kept in mind by the physician in his prescription writing.

In the assaying of the tinctures or fluid extracts of the alkaloidal drugs the gravimetric method is that most frequently used; the volumetric has been tried but not found sufficiently accurate. To illustrate this method the fl. ext. guarana may be taken. It should assay from three to five per cent. of caffeine, which exists as a tannate.

Place ten c.c. of the fluid extract with four c.c. solution of perchloride of iron in a glass mortar and stir in sufficient sodium bicarb. to form a stiff paste. Triturate the magma with chloroform in three portions of ten c.c. each to ensure extraction. Mix the solutions, filter through absorbent cotton, and evaporate to dryness in a tarred capsule on a water bath, weigh and multiply the weight in grains by ten, which equals the percentage of alkaloid present. The rationale of all this is quite simple; the tannin attacks the iron base, the alkaloidal base now becoming attached to the hydrochloric radicle of the ferric chloride as caffeine chloride.

This new compound in turn being decomposed through the agency of the soda bicarbonate—common salt is formed with the evolution of carbonic acid gas, the alkaloid set free is then washed out by the chloroform. The insignificant amount of coloring matter retained about balancing any loss in weight in the manipulation.

This product may be purified by dissolving in hot alcohol, then filter through animal charcoal and dry, by which snow white crystals are obtained. The process of extraction given before excludes tannates, gums, albuminates and inorganic acids. For roots and seeds, such as aconite, ipecac and nux vomica, which contain resins, fats and waxes, also soluble in chloroform, a modification has to be resorted to. Treat the chloroformic solution with a one-in-fifty solution of sulphuric acid, in a bulb separator, using three portions of ten c.c. each.

A sulphate is formed leaving the resins, etc., behind. Now mix the acid solutions and render alkaline with ammonia, when the alkaloid will be precipitated. It may now be dissolved out by chloroform, separate, evaporate to dryness, as before, and weigh.

If a green extract of a leaf is presented which contains chlorophyll in addition to the fats, etc.,—as in belladonna or coca,—proceed as above until the acid solution is obtained, then agitate lightly with ether, in two portions of ten c.c. each. This extracts the green coloring matter; then proceed from the acid solution as before indicated.

Since we have mentioned the convenience of the bulb separator, it might be well to direct attention here to its application in Toxicology, for the isolation of an alkaloidal poison from stomach contents. It may

be accomplished by this same "shaking out" method, the principle of which has already been sketched. Having secured the suspected contents, acidulate with dilute hydrochloric or acetic acids, to insure the formation of a soluble salt, and if not quite fluid, dilute with distilled water, to insure their solution. Filter, set aside half the filtrate, which if required, is to be tested later for poisons other than alkaloids. Render the remainder alkaline with ammonia, when the alkaloid if present, will be precipitated. Transfer to the separator, add chloroform until the ppt. is dissolved, then draw off the lower chloroformic layer. Now cleanse the separator and return the chloroformic solution to it, add an equal volume of a one-in-fifty solution of sulphuric acid, agitate gently and again separate. The alkaloid is now in the upper layer as an acid sulphate in solution. It only remains to divide this solution into as many parts as there are likely poisons indicated and apply to each, in turn, a reliable test reagent for those alkaloids. Having found and recognized one of them, the other half of the contents reserved may now be treated in the same manner through to the acid sulphate solution to avoid fats, precipitated again with ammonia, add chloroform until the precipitate is redissolved and separate the lower layer, evaporate to dryness and weigh. Twice this product will represent the amount of free alkaloid still unabsorbed.

A CHINESE HOSPITAL.

A Visit to the 'Tung Wah' or Native Chinese Hospital at Hong Kong.

COLIN A. CAMPBELL, M.D.,

Surgeon C.P.R. S.S. Tartar.

Escorted by a kindly Sikh policeman after a first ineffectual attempt to find the hospital with a jinricksha man, I again climbed the steep narrow street, turned up a cement paved lane and entering in an archway in a smooth stone wall stood in the courtyard of the Tung Wah. Broad stone steps flanked by great pillars of polished wood led up to the open temple-like rotunda with its floor of stone flags and walls of bare brick. On an altar at the farther end tapers were burning before the medicine joss.

Through the courtesy of Dr. Thompson, of the Government Medical Staff, I came furnished with an introduction to the Superintendent, Dr. Chung and found the latter in his office. While waiting I had an opportunity to note the evidences of modern life; the roll top desk, the telephone, the three or four busy clerks, the bright Oriental furniture and polished floor: within the doctor's private consulting room the decorations were still more European in character.

The Tung Wah Hospital is an institution managed by and for the Chinese alone, and offers them the choice of modern, or as it is called foreign treatment under Dr. Chung, or the old Chinese doctors' treatment. Fully two-thirds of the patients admitted prefer the latter and

this number includes many of the wealthiest Chinese and those best acquainted with foreigners.

Dr. Chung is a native Chinaman, educated at Tien Tsin. He spoke English fluently and showed a thorough knowledge of his profession but in conversing with him one does not notice the shaven head and long cue—he sees only a thoughtful earnest man of science.

The hospital wards are large and airy, each holding fifteen or twenty patients on as many hard board stretchers. The utter absence of mattresses and bed covers and the plain brick of the walls certainly give the wards a bare comfortless appearance, but in a climate of such intolerable heat plain matting makes about as comfortable a bed as it is possible to find. There is accommodation for one hundred and eighty patients in the hospital and it is usually crowded. Whole wards are filled with beri-beri, dysentery and malaria; and those under modern and Chinese treatment are indiscriminately in the same wards. There is a ward for incurables, always overcrowded, and another for the destitute, in which several emaciated beings stretched on the floor, a shelter for the night.

The hospital is composed of several low buildings and straggles up the hill after the most approved cottage plan. The Chinese dispensary where native medicines are prepared disclosed a room with walls hidden by drawers of drugs, and a row of small brick stoves for making decoctions, etc. A soft black mass of the size of a crab apple was shown me as a Chinese pill, but I learned that it was dissolved and taken, as they take all medicine, hot. Aromatics and bitters enter largely into their pharmacopoea, but they have no conception of the physiological action of any of the more active drugs or alkaloids. They know nothing of physical diagnosis, have no stethoscope and form their opinion of a patient's condition entirely by the pulse and *facies*. Their surgery can hardly be called more advanced for they never use the knife and know no other treatment for inflammation than plasters. I saw a fracture of both bones of the leg they had put up in a sort of a box-splint hollowed out of a solid block of wood. Some strips of bark, put next the skin for some supposed curative property formed coaptation splints, but immobility was not secured, the leg was not swung and the position was very bad. Dr. Chung tells me that the bones usually unite but only after prolonged periods and deformity is a very common result. There is little scope for clean surgery. Infected wounds, especially plantar abscesses are very common and from neglect frequently entail amputation. It is the dread of the knife that makes so many prefer the old Chinese treatment. Speaking of neglect, I saw one poor wretch with dysentery whose feet were horribly gnawed by rats he was too weak to fight off, before he was discovered and brought in.

Dysentery is very prevalent among all classes here and is frequently attributable to malaria. Want of opium accounts for a good many cases. Ipecac as a remedy he has found to be of no value with Chinese.

Malaria also is very common and the quartan type is not rare. Dr. Chung says, and quoted Dr. Bell of the Government Civil Hospital, that he has been able to find the plasmodium in only 3% of cases diagnosed clinically as malarial, and responding to quinine.

Two wards were filled with beri-beri, and showed this strange disease

in all stages of its various forms. It is almost confined to the poorest classes, particularly coolies, tailors and barbers. Females are practically exempt, although he described a puerperal form coming on seven or eight days after delivery as not uncommon. The mortality under good treatment, which included digitalis and strychnia, and plenty of albuminous food, meat and beans was about 30%. Six months was the average duration but this could be considerably reduced and all danger of relapse avoided if the patient were sent back into the country.

Plague was not supposed to enter the hospital, but that day, as frequently happened three cases had been brought in in a moribund condition and had died in the receiving room. In diagnosing plague he depended most on the extreme prostration with fever, injected conjunctivae, headache and a furred tongue with red edges and raised papillae. Buboes were not constant before the second or third day. Of six cases I myself saw at the mortuary one day, only one had a bubo mass large enough to be visible. The five others had died before the destructive process in the glands had gone past congestion and internal haemorrhage.

A CASE OF BRONCHO-PNEUMONIA TREATED BY OXYGEN INHALATION.

By J. T. FOTHERINGHAM, M.D., Professor of Therapeutics Trinity Medical College, and
A. F. STANTON, M.D., House Physician, Toronto General Hospital.

R. V., act 11, admitted to Sick Children's Hospital May 6, 1900. He had been in the same institution three months previously under treatment for tuberculous arthritis of the knee joint. He had taken ill a week before admission, having caught a cold which did not improve under treatment.

CONDITION ON ADMISSION. Patient lies on the left side and prefers to have the head high and back supported by pillows. Respirations quickened (64 per minute) short and shallow. Dyspnoea very apparent. Lips and fingers cyanosed. There is clubbing of the fingers and toes. Expectoration profuse, muco purulent, at times tinged with blood. Pulse small and rapid (130 per minute). Temperature 104° F.

PHYSICAL EXAMINATION. Inspection, expiration is prolonged. There is some elevation of the chest wall, but little true expansion. Percussion, a dull area over the left upper lobe and over both bases. Auscultation, bronchial breathing over the left upper lobe and bases; elsewhere, over entire chest fine crackling and bubbling râles are heard. Palpation, vocal fremitus increased over left upper lobe. Treatment, calomel followed by salines, liq. strych. m ii. every four hours; spts. frumenti ʒ i. every four hours; tr. digitalis m iv, ammon. carb. gr. i., vin. ipecac m vi every four hours. Milk diet.

Under this treatment for several days the patient showed signs of improvement. Expectoration was free and the lividity less pronounced than on admission.

May 9. Treatment, pot. iod. gr. i., creasote m v. four times daily.

May. 11. Patient's condition not so favorable; lividity more marked. Some puffiness about the eyelids. Treatment, tr. belladonnæ m v. four times daily.

May 15. Condition more unfavorable; pulse rapid and irregular; area of cardiac, dulness increased showing dilatation of the right heart. Treatment, quin. sulph. gr. i. every hour for six doses; ammon. brom. gr. xii at 4 and 8 p.m.

May 16. Very irritable and restless; marked puffiness of the face; extremities show signs of commencing œdemia. Examination of urine shows the presence of blood and albumen. For some days at this period the secretion of urine was almost suspended. Treatment, morphia sulph. gr. 1-20 at 8 p.m.; tr. belladonnæ, half the previous dose.

May 17. Patient much weaker; the response to free stimulation is slight. At 2 p.m. commenced the continuous administration of heated oxygen. Liq. strych. m iv. every four hours; spts. frumenti 3 ii. every two hours.

May 18. General condition somewhat improved; the lividity is less marked.

May 20. Patient distinctly better; pulse is improved in rate and tone. Urine is passed in larger amount; still contains hyaline and granular casts; blood in considerable quantity, epithelium from renal pelvis, pus. Treatment, creasote mixture discontinued; pot. nit. gr. ii.; pot. cit. gr. v.; mag. sulph. gr. xx. every four hours.

May 22. Improvement continues; apices of lungs clearing; smaller percentage of albumen in urine.

May 24. Left apex almost free from râles. Treatment, spts. frumenti 3 ii. every four hours; liq. strych. m ii. every four hours. Oxygen now administered only half time.

May 28. Expectoration very free; cyanosis rapidly disappearing. Oxygen administered one quarter time.

May 30. Oxygen discontinued.

—A.T.S.

The main point of interest in this case is that the recovery from a condition ordinarily absolutely hopeless may, with an unusual degree of certainty, be attributed to one therapeutic measure. The inhalation of oxygen undoubtedly saved life, as asphyxiation was far advanced when the oxygen was begun, and with such condition of both lungs and kidneys only one event could be looked for. The rubber-tubing used had a flat glass mouthpiece in the end of it, which lay in the mouth even while patient was unconscious. Intermission of the oxygen caused prompt increase of the cyanosis for the first seven days of its administration. After this period, for four days longer it was given ten minutes out of every twenty, and for two days longer only five minutes in every twenty. The enormous expense to which the Trustees of the Hospital for Sick Children went to save the life of this little charity-patient is not entirely unique, but deserving of the highest commendation.

—J.T.F.

SELECTED ARTICLES.

NASO-PHARYNGEAL DISEASE IN PEDIATRIC PRACTICE;
A CLINICAL STUDY.*

BY FRANCIS HUBER, M.D., NEW YORK.

Naso-pharyngeal disease in pediatric practice may be viewed from one of two standpoints—the specialist's or the general practitioner's. The former is apt to see the cases late, when serious secondary troubles may have developed; the family physician, on the other hand, is more likely to be consulted at an early date. It is, therefore, important that the possible evil influences, direct or indirect, exerted by naso-pharyngeal troubles generally, and adenoids in particular, should be kept in mind—otherwise the treatment will be symptomatic and palliative, rather than radical and curative.

The symptoms vary with the individual. In one the brain receives the brunt of the attack, in another the chest, in others circulatory or digestive disturbances are manifested, and so on. In some the relationship is evident, in others a careful study only will clear up the case. Much may be accomplished in the way of prophylaxis by a correct and early diagnosis.

The following, taken from Jacobi's masterly, instructive and scholarly article, "Some Preventives," is suggestive and will serve as our text: "Nasal catarrh, with its hyperemia and soreness of the mucous membranes, predisposes and causes chronic hypertrophy, adenoid growths, tumefaction of submental and submaxillary lymph bodies, invasion of diphtheria and tuberculosis, and occasionally meningitis.†

It is not to be inferred from the above that adenoids are the result of repeated attacks of nasal catarrh in all cases. In numerous instances, particularly when occurring in families free from syphilis or tuberculosis, the lymphoid hypertrophies must be regarded as the local manifestation of a constitutional dyscrasia, to which the term lymphatism has been applied.

In quite a number the trouble is congenital or shows itself within the first few months after birth. As lymphoid hypertrophies in the upper and middle pharynx are frequent in children, it seems but logical to conclude that the enlargement of the pharyngeal tonsil in many cases is primary, and the catarrhal condition of the naso-pharynx, particularly when attended by a semi-purulent discharge, secondary—an effect and not the original cause. Our work will be facilitated and the ground cleared for subsequent discussion in detail, if at this point we refer to the

*Written for the "Jacobi Festschrift," and read by title before the American Pediatric Society, Washington, D. C., May 1, 2, 3, 1900.

†*Philadelphia Medical Journal*, Dec. 10, 17, 24, 1898.

functions of the nose and indicate thereby the anatomical relations of the naso-pharynx.

The main functions of the nose are :

(a) Respiratory,

(b) Olfactory,

(c) To give resonance to the voice,

(d) And to act as a regulator of the aëration of the middle-ear,

and, we may add, of the accessory air chambers or sinuses in the frontal, maxillary, ethmoidal and sphenoidal bones.

Two conditions, patency of the nose and throat, and a healthy mucous membrane, are essential to the proper performance to the work. Disease, with a greater or less degree of stenosis, shows its evil effects in many ways, to be discussed later on.

The naso-pharynx serves as a common area of air communication between five openings. The Eustachian tubes, one on either side, posterior to the nasal choanæ, ventilate the middle-ear. The acuteness of hearing depends upon the patency of the openings with free nasal respiration. The posterior nares also open into this space. They act as the normal channels for the passage of air through the nares to the lungs. Unobstructed nasal breathing is essential to the proper ventilation of the accessory sinuses of the frontal, superior maxillary, ethmoidal, and sphenoidal bones. Finally, at the lower portion, communication is established with the oro-pharynx.

As a pathological entity enroaching upon or invading this space, we frequently meet with a hypertrophied condition of the lymphoid structures (Waldeyer's Tonsillar Ring.) The symptoms are local and general. Some are caused by pressure, others are inflammatory in character, and many are the result of anatomical changes more or less permanent.

A discussion of the topic may appear trite to the specialist. In cannot be told too often to the general practitioner. Specialists, as a rule, do not see the cases early; the general practitioner, on the contrary, is frequently consulted at a time when a recognition of the trouble enables him to ward off many outward evil effects by proper local treatment, operative or otherwise.

Though naso-pharyngeal troubles are very common, in general practice, unfortunately, they are frequently overlooked, treated lightly, or dismissed with a few general directions. This is a serious error. Parents must not be led to believe that the child will outgrow the disorder, or that the symptoms will disappear about the time of puberty.

Advice of this sort, with neglect of appropriate measures, is certain to be detrimental to the mental and physical welfare of the patient. The popular belief, that operations upon the tonsils, etc., may be followed by defects in speech or imperfect development of the genitals, must be combated. Parents often refuse operative interference, until assured that no evil results will follow in this respect.

The family physician does well to remember that his duties are not confined to the treatment of an individual case or disease. Children under his care ought to be regarded as his wards from a medical standpoint. With a history of recurring attacks of nasal catarrh or mouth

breathing, the dangers should be made clear to the parents. Unnecessary delay or procrastination must be avoided.

The attendant should bear in mind that the effects are not altogether local. Disturbances, cerebral and nervous, due to the obstructed blood and lymph circulation at the vault of the pharynx and base of the brain, are frequent. Deformities of the chest, bronchial and pulmonary inflammations, are common, as are recurring attacks of catarrhal croup.

The general circulation is interfered with, respiration, digestion, etc., disturbed, and dyspnoea may be present. The poorly developed muscles, with lowered vitality in general, lead to chronic invalidism or render such patients an easy prey to acute disease.

In addition, enlarged lymph nodes at the angle of the jaw, repeated attacks of nose-bleed, acute and chronic bronchitis with emphysema and asthma, bronchopneumonia, large bronchial and mediastinal lymph nodes, are frequently secondary to a morbid state in the naso-pharynx. The paroxysmal nocturnal cough, quite common in children, distressing and alarming in character, disappears when the nose and throat are treated. The special senses, taste and smell, are more or less impaired in older children. The voice is altered and assumes a nasal character. Inability to pronounce the letters *m* and *n* and in some cases stuttering exist.

Disease of the eye may be reflex or arise from a direct extension of the process in the nose. Most commonly there is direct extension. Deformities in the nasal passages, acute or chronic catarrh, and adenoids give rise to affections of the lachrymal sac and conjunctiva.

Pupillary changes, photophobia, disturbed accommodation, strabismus, blepharospasm, etc., are at times of reflex origin. A normal mucous membrane is the best safeguard against the onset of a number of infectious micro-organisms. The invasion of diphtheria, tuberculosis, and now and then meningitis, is favored by an abnormal condition of the nasal and pharyngeal mucous membrane. The best preventive therefore, is to keep the mucous membrane in a healthy state. The eloquent appeals in favour of a routine naso-pharyngeal toilet have aided somewhat in popularizing the method. In the tenement districts, where most necessary, the precautions are imperfectly employed or wholly neglected. In this connection, it may be stated that, when a child with adenoids and associated nasal catarrh contracts diphtheria, an extensive surface is apt to be involved. The type will be severe, the progress correspondingly grave. On the other hand, children who "take cold" easily, who present but few evidences of lymphoid hypertrophy up to this time, often develop decided symptoms of obstructed nasal breathing after an attack of diphtheria, scarlet fever, or measles—at times, in spite of carefully conducted nasal toilet during the course of disease.

Small painless lymph nodes at the angle of the jaw, about the size of an almond, are common. Though frequently mistaken for tonsils, this is an error. They are due to infection from the naso-pharynx, and point to the presence of adenoids or a moderate degree of nasal catarrh. If an exacerbation of the latter takes place or an infectious disease is super-added, the nodes begin to swell and become more or less painful. Under appropriate treatment with nasal injections and cold applications exter-

nally, the process subsides and resolution takes place. In other instances suppuration occurs, either nodular, perinodular, or both. Now and then the capsule becomes thickened and the process remains quiescent; sometimes caseation takes place or calcareous or fibroid degeneration occurs. Other chains of lymph nodes may be involved, the process extending downward to the bronchial lymph nodes. The chief danger, however, lies in the tendency to become tubercular. In the latter case, the process may remain local, infect other lymph nodes and tissues in the vicinity, or general tuberculosis may result eventually.

Surgeons, recognizing the danger, advocate and practice the removal of enlarged or tubercular cervical lymph nodes. Yet adenoids and large tonsils have been allowed to remain, to serve as a nidus for subsequent infection. They, as well as the external lymph nodes, ought to receive surgical treatment.

A large proportion of ear troubles, from 60 to 75 per cent. according to different authorities, are secondary to diseases of the nose and throat.

Adenoids, in particular, constitute an all-important etiologic factor. In nearly every case, ear disease is certain to follow and no time should be lost in advocating their removal as a prophylactic measure. Clifford Allbutt says the very worst degrees of depressed ear-drums are found in those affected with large growths. Deafness, deafmutism, and ear disorders in general are benefitted at times by local treatment of the throat. In the course of the exanthemata and other infectious diseases, suppurative otitis with perforation is very apt to develop whenever a prior inflammatory irritation or congestion of the naso-pharynx is present. The danger is increased if the pharyngeal or faucial tonsils are hypertrophied. Otitic troubles arise in several ways.

The Eustachian tube may be occluded with mucus, the pressure of adenoids against the orifice may cause its obstruction, and thus interfere with the proper ventilation of the middle ear, or the catarrhal inflammation may extend through the tube and involve the delicate structure of the ear.

Trousseau, years ago, and others since then, have called attention to recurring attacks of erysipelas of the face in chronic aural or nasal catarrh with erosions of the skin. New outbreaks are avoided when, as a prophylactic measure, the primary condition of the ear, nose, or throat is relieved. A few cases of this kind have come under our observation at the Vanderbilt Clinic. The same is true of dermatitis and eczema under analogous conditions.

As to general diseases accompanied by local throat or nasal symptoms. In tuberculosis, syphilis, and rheumatism,* and in the acute infectious diseases, the general characteristics are such that the nature of the local condition does not remain in doubt for any length of time. Now and then some difficulty may be met with in diagnosis.

Anatomists have clearly demonstrated the direct lymphatic communication between the vessels in the naso-pharyngeal mucous membrane and those at the base of the brain. Bacteriologists have reported the presence of micro-organisms in the nose and throat similar to those found in many cases of meningitis. Clinical observations show that the differ-

ent varieties of meningitis are most commonly observed between the ages of three and five years, at a time when naso-pharyngeal troubles are very common. The intimate lymphatic connection referred to, and the identity of the micro-organisms in the naso-pharynx and those found in a large number of cases of meningitis, tend to explain the etiology of many heretofore obscure inflammations of the brain and meninges.

A general infection by way of the blood must be distinguished from a local infection arising from some region in the neighborhood of the skull. A frequent mode (beside the one referred to above) is through the Eustachian tube to the middle ear and thence to the cranial cavity. As a result, thrombosis, sinus-pyemia, inflammation of the meninges and brain, with or without abscess, are not infrequent.

Growth in general is more or less interfered with in many instances. Ewing, in an excellent article directing attention to the work done abroad, presented additional facts showing the diminished power of resistance, with the liability of sudden paralysis of the heart, in many of these patients.

Furthermore, a number of cases of sudden death during anesthesia for the removal of adenoids have been collected by Hinkel.

Deformities of the thorax, due to adenoids, are met with, though it should not be forgotten that other factors are usually associated. The worst cases occur in rachitic subjects, particularly when bronchitis and pulmonary inflammation have been of frequent occurrence. The deformities vary in degree from the flat chest of the milder to the "barrel-shaped" and "pigeon breast" of the advanced type.

In seeking an explanation, it may be interesting to refer to the effects of nasal obstruction upon respiration, and to note the difference in the physical character of the air when it reaches the lungs in a normal manner through the nares, or abnormally by the way of the oro-pharynx. Inspired through the nose, the air is warmed, filtered, and moistened; in addition, further modifications occur from an interchange of gases between the blood and the atmospheric air.

When breathing is carried on through the mouth, these changes do not occur, and the air not being filtered, warmed, or moistened, acts as an irritant. Consequently the delicate structures of the larynx, bronchi, etc. (rendered more susceptible because of the chronic catarrhal inflammation of the nose and throat), readily become inflamed. As the distal portion of the lungs do not expand fully under such conditions, the external atmospheric pressure being greater, the chest wall sinks in and deformities result. The degree varies according to age, the condition of the bony structure of the chest wall, the development of the muscular tissues, the presence of bronchitis and the amount of existing pulmonary collapse or deficient expansion. We are all perfectly familiar with the difficulty and discomfort experienced in breathing when afflicted with a

* Since the above was written, Dr. Packard, in the "Wesley M. Carpenter Lecture," discusses in an able manner "Infection through the Tonsils," especially in connection with acute articular rheumatism.

cold in the head. The respiration becomes labored, and the lungs expand imperfectly for the time being.

In the case of the infant or child, the condition is more or less permanent, depending upon the degree of stenosis and the presence of acute or chronic catarrh. The breathing is superficial and the effects are more severe and lasting. Let any one attempt the simple experiment of breathing through the mouth for a short time, he will quickly realize the discomfort and fatigue, the dyspnoea, sense of imperfect expansion, and the feeling of weight upon the chest.

In mild cases, in the young, the lungs expanding imperfectly, allow the thoracic walls to fall in, causing a shortening of the antero-posterior diameter. The chest becomes thin and flattened, the intercostal spaces are depressed, and the infra- and supra-clavicular regions retracted. The Funnel Breast (*Trichterbrust*), characterized by a funnel-shaped depression at the lower portion of the sternum, certainly, in some cases, is secondary to the nasal obstruction. It has been my good fortune to see a few in the process of development.

My experience accords with Osler, who says: "During inspiration, the lower sternum was forcibly retracted, so much so that at the height the depression corresponded to a well-marked *Trichter-brust*. While in repose the lower sternal region was distinctly excavated." A similar state of affairs was observed in an infant with a syphilitic affection of the nasal mucous membrane. The deformity disappeared as the nasal symptoms improved under anti-syphilitic treatment.

In marked cases associated with rickets, the chicken or pigeon breast is observed. The sternum is prominent, particularly at the junction of the first and second portion, the ribs project anteriorly, while laterally, above the diaphragmatic or rachitic groove, the chest is depressed, giving a triangular shape to the thorax. In advanced cases, the chest is almost fiddle-shaped. In a well marked instance in a child eighteen months old presented at one of our classes during the "Practical Course," it was surprising how quickly the deformity was remedied, when the patency of the naso-pharynx was restored. The "Barrel Chest" is not infrequent, and occurs in those who are afflicted with chronic bronchitis, emphysema, and asthma. The neck is short, and round shoulders with or without scoliosis may be present.

In the absence of other causes, Coolidge believes that some of the atypical orthopedic deformities may result from a lowering of the general nervous vitality, frequently seen in patients with adenoids. Bilhaut found voluminous adenoids in many cases of scoliosis, removal of which at an early date brought about cure. Whatever the relation may be, it is important to secure pulmonary expansion in such cases, as the cure or improvement of the scoliosis is facilitated by furthering the development of the muscles and establishing good nasal respiration.

A practical point in hastening the cure of empyema may be incidentally referred to in this connection.

In a few cases of empyema in mouth breathers, curetting of the naso-pharynx, by favoring pulmonary expansion through improvement in the

breathing, caused the obliteration of a small cavity or sinus, thereby avoiding a secondary operation upon the costal walls. In the same way, the associated lateral curvature rapidly disappeared when nasal respiration was established.

Snuffling in infants with retracted root of nose is of such evident import that even the tyro in medicine gives a correct interpretation. The nasal deformity should not be confounded with a similar state in cretinism and some forms of idiocy. The change in the appearance of the face, due to long-existing mouth-breathing, is characteristic, and admits of a ready explanation. The dropping of the lower jaw, due to a functional loss of tone in the muscles, adds to the length of the face, the latter appearing longer because of the deficient development of the superior maxilla.

The proper ventilation of the accessory sinuses or air chambers is interfered with by the naso-pharyngeal obstruction. As a result, the blood supply is modified, normal growth of the bones does not occur, and expansion is retarded. The anemia and mal-nutrition, in consequence of the accompanying digestive and circulatory disturbances, leave their impress upon the face and give the drawn appearance to the eyes and mouth. The facial muscles are poorly developed, and the pinched nose or distended alæ add to the deformity. These changes, taken in connection with the mental state, give rise to the characteristic physiognomy.

A high-arch palate, with narrowing of the transverse measurements of the jaw, presenting a pointed appearance in front, with resulting contraction of the alveolar process, crowding and even rotation of the teeth on their axis, is frequent. The absence of the support of the tongue and increased atmospheric pressure upon the roof of the mouth, in consequence of the buccal breathing, explain the deformity. The gothic-shaped palate in turn crowds the septum, causing a deflection, and thus adding another factor to aggravate the inconvenience of the original trouble.

the teeth show a tendency to early decay, particularly the molars. In some cases, stomatitis and gingivitis occur, persisting until the growths are removed. The breath is more or less offensive, the odor being caused partly by the bad teeth and partly by decomposed secretions, etc. Imperfect mastication, the rapid bolting of food, and the general anemia keep up and intensify the dyspeptic symptoms.

In younger children, particularly under a year, after exhausting disease with pronounced muscular weakness and relaxation, there is an additional danger, due to the tendency to falling back of the tongue and possible asphyxiation in consequence—particularly if the patient is allowed to sleep upon the back. Such cases must be carefully watched, and must be kept lying on the side. Strychnin and good diet soon restore the muscular tone.

Older persons frequently complain of shortness of breath. Talking, going up stairs, or rapid walking produces dyspnea and palpitation. A careful examination shows that the symptoms are due to the nasal trouble, and not to heart disease.

Naso-pharyngeal obstructions induce abnormal breathing, anemia, disturbed sleep and a variety of nervous manifestations. The disposition is altered, the children become fretful or sullen, the memory is defective,

and, apart from the impairment of hearing, such patients are inattentive, backward and dull.* In cases in which the growths have existed for a long time, the process may cause anatomical changes in the meninges and brain, with resulting idiocy.

Headaches, often of a low grade, limited to the forehead and temple, may be accounted for by the retention of morbid products and obstructed circulation. Attacks of night terrors, walking in sleep, morbid dreams, melancholia and other evidences of disturbed cerebral functions may occur.

The mental and nervous phenomena are of extreme interest and importance. The question has been studied by Wells in an able and exhaustive article (*American Journal of Medical Science*, December, 1898), from which the following is quoted:

"Since we are dealing especially with the psychopathic phenomena, how, we may inquire, can an obstructive lesion of the nose interfere with the cerebral functions? Briefly, by (a) alteration and impoverishment of the general, and secondarily of the cerebral, circulation, from the overcharging of the blood with CO₂ and the diminished supply of O, which are the necessary results of deficient aeration; (b) interference with the blood-supply of the brain by the lesion in the nose; (c) hindrance to the outflow of lymph from the brain. It has been shown that the subdural and subarachnoid lymph spaces are in direct connection with the lymph vessels of nasal mucous membrane. Guye held that aprosexia was owing to the interference with the lymph circulation, by reason of which the products of cerebral tissue metabolism are accumulated in the brain, producing brain fatigue or the so-called 'retention-exhaustion.' (d) It is barely possible that there may be some direct oxidation by the central nervous system, by means of the olfactory bulb (as in some animals) which function, if it exists in man, would be prevented by obstructive lesions of the nose."

Exceptionally a pure reflex case may present itself. In the vast majority, other causes exist, the removal of which yield brilliant results. In view of the marked improvement and entire disappearance of local facial spasms at times, following the relief of the naso-pharyngeal disease, some relation of cause and effect must be admitted. The deleterious effects of the nasal disorder upon the blood and lymph circulation in the brain, and the accompanying anatomical changes, are responsible in a measure, for the various neuro and psycho-pathic manifestations occurring in *neurotic* subjects.

Jacobi, in an article published in 1886, directed attention to "partial, and sometimes general, chorea minor from naso-pharyngeal reflex." During the past ten years, the writer has seen quite a number of cases (at the Vanderbilt Clinic) improve under local treatment directed to the naso-pharynx, arsenic being given at the same time, though arsenic and tonics alone failed to make much impression.

Nasal obstructions (inflammatory or otherwise) no doubt act as factors

* Ribot holds that acts of attention are accompanied by a temporary suspension of the respiratory rhythm. The air hunger, depending upon the presence of adenoids, therefore of necessity interferes with the psycho-physiology of the act of attention. In this way he would explain the mental state of such children.

in the production of asthma, in a number of cases—not, however, as the sole agent. A neurosis which remains active after the nasal trouble is relieved is generally found.

In the discussion of this part of our subject, three conditions must be considered: First, predisposition, varying in degree in different individuals; second, some abnormality or undue excitability of the mucous membrane in some portion of the air passages; and, finally, a distinct irritant, which in consequence of individual idiosyncrasy, is reflected to, and again from, the respiratory centre. The greater the predisposition, the less the exciting cause needs to be. The truth of this was infrequently exemplified in our experience at the Clinic. In numerous cases, the tendency to bronchitis was relieved by freeing the naso-pharynx. Yet the attacks of asthma would occur, sometimes less frequently; in other instances, no benefit resulted; now and then a cure was noted, probably in cases in which the predisposition was slight.

For a moment, attention will be directed to a brief study of the cases in which enuresis is observed. In some the incontinence is nocturnal, in a larger number it is both nocturnal and diurnal. A neurotic condition, with anemia and flabby muscles generally, is frequently found to be associated with the urinary difficulty. Increased thirst and polyuria add to the distress. As to an explanation, a plausible solution is offered in the mental state incidental to mouth-breathing. Apathy and listlessness, with disturbed intelligence and deficient innervation in general, are present—*conditions*, manifestly the result of the obstructed circulation in the blood and lymphatic vessels at the base of the brain and vault of the pharynx.

The higher inhibitory centres, for reasons given, do not act in a normal manner; the bladder reflex, consequently, is not respected, and incontinence follows. Furthermore, the frequent indulgence in water, to relieve the thirst caused by the parched condition of the lips and tongue, produces increased flow of urine, another factor in the etiology. Drugs are of very little service under such circumstances; to cure these patients, the pathological state in the naso-pharynx must be removed.

An attempt has been made to present the more important features. Much might be added. The instructions in the following, taken from the paper of Jacobi, are to the point. If carefully followed, many evils may be avoided and a great deal accomplished in the way of prophylaxis.

Jacobi writes:

"I have always made it a rule to keep all the integuments clean. At least once a day a physiologic solution of salt water is poured through the nares of every infant or child over whom I have control. Big adenoids should be removed, large tonsils resected. There is more danger in a dirty nose than in an unwashed face. Only do not be satisfied with merely ordering it. I have met many a 'trained' nurse who did not know how to inject or irrigate a nose. A mother or a child's nurse should be instructed by you personally how to do it. Here, as everywhere, when two do the same thing it is by no means the same. There are many cases of nasal diphtheria, such as are most likely to resist the influence of antitoxin, which are still spared a fatal termination by persistent and correct irrigation of the nares and naso-pharynx.

"Pure air and sunlight are indispensable to health. The air should enter the lungs by way of the nasal passages; 'And breathed into the nostrils the breath of life,' we find recorded in Genesis.

"There is more than a grain of truth in the aphorism. 'Shut your mouth and save your life,' found on the title page of Captain Catlin's celebrated pamphlet on mouth-breathing."

The homely, forcibly expressed dictum of Catlin must not be lost sight of. Give the little patients free nasal respiration, and give it to them early—the earlier the better.

Preventive medicine has done much to alleviate human suffering. Efforts in this direction have already borne fruit, and as a knowledge of etiology increases, advance in prophylaxis will keep pace.

These assertions are particularly applicable to our subject. To sum up, we may add:

1. The removal of the lymphoid hypertrophies in the naso- and oropharynx, with the cure of the associated naso-pharyngeal catarrh, will restore the patency and permeability of the nose. If done early, many local pathological changes may be avoided.
2. The general health will be more or less improved.
3. The mental faculties and general intelligence will be improved.
4. Defects in speech and in hearing due to nasal troubles will disappear.
5. Deafmutism may be relieved.
6. The functions of taste and smell will be restored.
7. Reflex neurosis of various kinds will be modified or cured.
8. Nasal and supposed pulmonary hemorrhages will disappear.
9. Thoracic deformities will be relieved or cured.
10. The tendency to acute rhinitis, pharyngitis, laryngitis, bronchitis and pneumonia becomes less and less with the restoration of normal respiration.
11. The dangers attending the presence of enlarged cervical lymph nodes will be avoided.
12. The invasion of various infectious diseases is less likely when the nasal mucous membrane is in a healthy state.
13. The danger of meningeal infection from the naso-pharynx will be lessened.
14. Ear complications in general, and particularly those incidental to the infectious diseases, will be avoided or rendered less dangerous.—*Archives of Pediatrics*.

GONORRHOEA IN WOMEN.

DIAGNOSIS.—The diagnosis of gonorrhœa in women is much more difficult than in men, chiefly because a whitish, leucorrhœal discharge may be considered more or less normal in women, whereas in healthy men there is no urethral discharge.

The certain diagnosis of gonorrhœa in women depends very largely upon the demonstration of the gonococcus in the secretions. A profuse purulent urethral discharge is quite as diagnostic as it is in men, but

when one takes into consideration the fact that the acute urethritis is comparatively fleeting in its character, and that the disease may persist months and even years after all of these symptoms have completely disappeared, it will be seen that little importance can be placed upon this sign.

In securing the pus for examination the greatest precaution should be observed not to have it contaminated by other organisms. For bacteriological examination the vaginal discharge is almost valueless, because it contains, as a rule, such a large number of cocci and other bacteria. Secretions from concealed passages are the ones which are to be employed in a microscopical diagnosis. The urethra should be exposed, carefully cleansed with a mild disinfectant solution, and with the platinum loop the secretion should be withdrawn and placed upon a cover-glass; if there is no urethral secretion it may be possible to express a drop from Bartholin's duct. The cervix should always be examined, and to this end the Sims posture should be employed. Secretions obtained directly from the cervical canal are the most reliable, for when gonococci are demonstrated in them there is no longer any doubt as to the diagnosis.

For clinical purposes methylene-blue solution is a practical and easily manipulated staining fluid. The secretion may be spread out on the cover-glass or on a slide, the latter being usually the better. If it is very small in amount or rather thick and viscid, it may be diluted slightly with a drop of normal salt solution. After spreading it evenly, it is dried by passing it a few times over the flame of an alcohol-lamp or gas-burner. Methylene-blue solution is then dropped upon the slide and allowed to remain for from one-half to one minute, and is then carefully washed off in running water and dried with bibulous paper. It is not necessary to protect the stained area with a cover-glass, for it may be inspected directly either with a high-power or (which is always preferable) with a 1-12 oil-immersion lens.

To be certain of the diagnosis, the gonococci must be found inside of the pus-cells. While the presence of typical biscuit-shaped cocci in pairs free in the secretion without the association of other bacteria is very significant, it is nevertheless unsafe to make a positive diagnosis. One should never be content with one search, for gonococci may be found in a certain number of cases only after repeated examination. In one instance at least twelve negative examinations were made on different days before the gonococci were at last found.

In some instances in which the gonococci have not been found even after repeated examination the symptoms have been so characteristic that a tentative diagnosis of gonorrhœa has been personally made under the assumption that the micro-organisms were concealed. John G. Clark (Amer. Jour. Med. Sci., Apr., 1900).—*Monthly Cyclopaedia*.

THERAPEUTICS OF UROTROPINE.

The important place which urotropine has attained in genito-urinary surgery is exemplified by the fact that it was made the subject of a special paper by Dr. E. L. Keyes of New York (*Philadelphia Medical Journal*) at the recent meeting of the Congress of American Physicians and Surgeons. Among the instructive cases reported by the distinguished author, there was one of persistent anuria following external urethrotomy which was at once relieved by the use of the drug, the symptoms again appearing when it was discontinued. Dr. Keyes always uses urotropine when urinary chill is present, or is threatened, and it appears to be almost a specific in acute catarrhai pyelitis. Large doses may be necessary at first, these being followed by long-continued smaller doses. As a prophylactic against urinary chill, urotropine is highly recommended. Attention is called by the author to the fact that in some instances the drug caused dysuria, or that urine passed during its administration had an irritating effect on wounds with which it came in contact. This, it seems to us, is only likely to occur under the use of very large doses, and especially where the patient does not receive an adequate amount of water, so that the urine becomes highly concentrated. Dr. Keyes, however, instances a case of enlarged prostate in which $67\frac{1}{2}$ grains were given daily for months, and the patient rendered perfectly comfortable. According to Nicolaier, who has made the most thorough experimental and clinical study of urotropine, a daily amount of 15 to 22 grains is usually sufficient to obtain the desired therapeutic effect, and he advises that each dose should be dissolved in at least one-half pint of water. If larger doses are employed the quantity of water should be correspondingly increased.—*Southern Practitioner*.

ANTIPYRIN IN VESICAL IRRITATION.

Du Chastelet has performed lithotomy painlessly, after a rectal injection of antipyrin. It seems that this substance injected into the rectum exerts a marked local anesthetic action upon the vesical mucous membrane, permitting of manipulation of the viscus, and even incision of the membrane, without pain.—*St. Louis Med. Review*.

SOCIETY REPORTS.

CANADIAN MEDICAL ASSOCIATION.

At the City of Ottawa on the 12th, 13th and 14th days of September 1900, took place the thirty-third annual meeting of the Canadian Medical Association. Dr. R. W. Powell of that city occupied the chair and it was under his presidency the meeting convened.

The General Secretary read the minutes of the last meeting in Toronto, which were adopted.

The Present Status of the Eliminative and Antiseptic Treatment of Typhoid Fever.

This paper was read by Dr. W. B. Thistle of Toronto. It is now some seven years since Dr. Thistle introduced this plan of treatment to the profession. He thought that this plan of treatment of typhoid fever had time and again been misrepresented by Professor Osler and others, as he had never held to the opinion that the eliminative and antiseptic plan could rid such organs as the liver and spleen of the bacilli lodged in them. When once the typhoid bacilli gain access to the intestinal tract, the multiplication of them occurs with extreme rapidity and the intestinal contents teem with countless numbers of them. These are not confined to the intestine, but are to be found in the walls and in fact in almost every organ of the body. He was of the opinion that the draining of the intestinal walls following upon the action of a purgative such as calomel or magnesium sulphate would tend to get rid of some of these bacilli in the intestinal walls, but he did not claim that it would effect their exit from the liver etc. The treatment, Dr. Thistle thought, had been imperfectly applied in many instances without a clear conception of its underlying principles. Dr. Thistle has never had a single hemorrhage under this plan of treatment, what hemorrhage occurred having been always very slight, and he has also seen very few perforations,—and twenty per cent of the death rate is from hemorrhage and perforation. In Toronto this plan of treatment is universally adopted. The statistics at the Toronto General Hospital show, that from 1893 until the present time, there have been 833 cases in that institution with 56 deaths, a mortality of 6½ per cent.

In discussing this paper Dr. McPhedran said that he had been watching Dr. Thistle's work in this direction from the time of the appearance of his first paper on the subject, but could not agree with all his conclusions. He did not think that this plan of treatment lessened diarrhoea, tympanites, fever or delirium; and considered that Dr. Thistle was harboring the idea that purgatives in typhoid were a new discovery with him; this was not so. Twenty-five years ago Dr. McPhedran gave these for the first ten days at least. In addition to this he used to give carbolic

acid and iodine, and in a certain class of cases he thought he had the exact treatment. Another class would then come along in which that treatment had no effect whatever. He considered that the general toxæmia that existed, could not be eliminated through the bowel. It had to be done through the kidneys and skin.

Replying to the criticisms of his paper, Dr. Thistle emphasized the fact that he was *not* trying to eliminate bacilli from the glands. In clearing out the bowels, he was trying to eliminate *toxins* from the body and not bacilli.

A Case of Sarcoma of the Right Nasal Fossa with Acute Sinusitis and Orbital Cellulitis.

This paper and case was contributed by Dr. P. G. Goldsmith, of Belleville, Ontario. The patient was a man of thirty-eight years, a farmer, with an unimportant family and personal history. He consulted the doctor on the fourth of August last with severe frontal headache and double vision. The nasal fossæ were examined and growths found in the right one which along with some bone were removed. Then swelling and pain in the right eye began, so that it was seen to project downwards, outwards and forwards. The right nasal fossa was everted and the tissues sent to Professor Anderson, of the Trinity Medical College Laboratory at Toronto, who pronounced them sarcomatous in their nature, of small round cell variety, having the walls of the blood vessels thin and poorly developed. The discharge from the nostril had an odor similar to that proceeding from cancer of the uterus. Up to ten years ago Bosworth had collected forty of these cases.

Dr. R. A. Reeve stated that a number of years ago he had presented a paper on this same subject to this Association. He directed attention to the importance of examining the naso-pharynx in diseases of the orbit. He recited a similar case to Dr. Goldsmith's. In this case there was little pain, but an examination of the nose revealed the tumor.

President's Address.

Dr. R. W. Powell, the president, delivered his address on the afternoon of the second day when the Hall was well filled. He first recited a few reminiscences when on former occasions the Canadian Medical Association had convened in the Capital City, in 1871, 1881, 1889 and in 1893. He made a reference to the South African war in order to point out the unsatisfactory condition of affairs which permitted other colonial surgeons from Australia and New Zealand practicing their profession in that land without hindrance whilst Canadians were debarred from the same privileges. An earnest and united effort on the part of the profession throughout the whole Dominion of Canada in an endeavor to bring about inter-provincial registration, would facilitate matters in the direction of securing these privileges for the Canadian profession in other parts of the British Empire. The subject of tuberculosis was touched upon lightly to the extent that he favored the ordinary preventive measures and the prevalent and present established manner of treatment by sanatoria. He then dealt with a very important matter relating to a Medical Defence Association, favoring the formation of such and requested the Association to appoint a Committee to look into the subject and report at the next meeting.

Some of My Experiences in the South African War.

Surgeon Lieutenant-Colonel, George Stirling Ryerson, then addressed the Association upon this subject. He dealt first with the experience of modern bullets gained in this campaign. The very latest returns show that 986 officers and 11,701 non-commissioned officers and men had been wounded, of whom only 732 have died of wounds received in battle, which is to be ascribed to the aseptic character of the bullet and the prompt attention and antiseptic treatment. Dr. Ryerson then dealt with the wounds caused by these bullets. Referring to poisoned bullets being used, this was not the truth, as the tarnish or *vedigris* probably accumulated in transit through the barrel. He also doubted the fact of explosive bullets being used. The Boers made use of thousands of Martini-Henry, a heavy bullet, which caused great destruction of soft parts necessitating amputation. There were few amputations in this war. He quoted Kendal Franks who had performed 20 amputations in 2,000 cases. Whilst abdominal section in wounds of the abdomen was mainly inadvisable, he saw one case where the results were excellent. He spoke highly of the magnificent work of the R. A. M. C.

At the conclusion of this able address, Dr. T. G. Roddick, M P., highly complimented Dr. Ryerson for his remarks and further spoke of his great sacrifices in proceeding to South Africa at his own expense in order to carry out the work of the Red Cross Association. While in England recently, Dr. Roddick stated, that he made it his special business to enquire of returning Canadian soldiers as to the hospital management in South Africa, and although he had spoken to many of these, he had failed completely to find a single Canadian, who had anything but praise for the hospital arrangements in that country.

Our Race and Consumption.

Sir James Grant, Ottawa, contributed a very able paper on this subject. He considered it an important fact and one worthy of consideration that races had been born on this continent, had lived and died and entirely disappeared leaving mounds in the west and other traces in Florida and elsewhere of their undoubted existence; and that thus far there was no information as to the exact cause of the disappearance of these races. He thought it remained for the Anglo-Saxons to see whether they will prove more successful than their predecessors in establishing themselves. He referred to the loss of 3,000 lives in the Province of Ontario in 1898 by consumption alone, and deplored the fact that the people were not as yet alive to their danger. Sir James endorsed the Legislation passed at the last session of the Ontario Legislature designed for the purpose of assisting municipalities in the erection and maintenance of sanatoria for consumptives.

Recognition and Management of *Tabes Dorsalis*.

Dr. Allan McLane Hamilton prepared this paper which was read by the president at the request of the meeting. Syphilis as an etiological factor was not referred to by the early writers on this disease. While some would attempt to divide the symptoms of the disease into the leg

and eye types, the writer would consider that to be unwarranted. He considered there was a close resemblance or relationship between the different forms of cerebro-spinal sclerosis. There was no disease of the nervous system which had drawn forth so many plans of treatment; and but little or no good had resulted from any one thing. Most tabetics are favorable subjects for expectant treatment, and many derive temporary benefit from some new drug. Looking back over a number of years, he finds that most good has been accomplished where little or no medicine has been given. He has found rest by suspension and persistent cauterization of the back, good treatment. In the opinion of the writer, syphilis cannot be traced in more than fifty per cent. of the cases. For the arthropathies there is little to be done. Perforating ulcer is a rare feature of locomotor ataxia; and most obstinately resists treatment. He has seen three cases of this unusual condition in ataxies; and the ulcer rarely exceeds two or three centimeters in diameter. One authority mentions five cases cured by means of nerve stretching. Throughout the course of the paper, numerous cases were cited with their symptoms and treatment.

The Physician's "Vaster Empire."

This paper was contributed by Dr. John Hunter, Toronto. It dealt with sanitary science, education, social purity and medical missions. Referring to sanitary science, he entered a plea for the broader and freer application of the principles of this branch of medicine, in the building and construction of our homes, schools, churches, theatres, etc. No dwelling-house should be constructed except under the supervision of an architect and a physician versed in the principles of sanitary science. In the matter of sanitary science, architects had improved wonderfully during the past ten years. Another important question was that of our educational system,—the mental and physical development of our school children. The best way to secure physical vigor and high mentality was surely within the province of the physician to grapple with and study. In all forms of social purity, physicians should speak *ex cathedra* against every form of vice and immorality. The boys and girls of the family should be enlightened as to their sexual proclivities at proper periods by their fathers and mothers respectively. In medical missions, he referred to the vast field for medical missionary work in foreign countries.

Address in Surgery—Tuberculous Lesions from a Clinical Point of View.

At the evening session of the first day, the president introduced Mr. Edmund Owen, of London, England, who proceeded to deliver the Address in Surgery. He stated at the outset that the subject of his address would deal principally with tuberculous lesions as the surgeon meets them day by day in the hospital wards, in private practice and also in the operating theatre. Referring to the pathologists, he considered their thought to be only of the dead tissue, whilst the surgeon sees the human tree during its life but rarely follows it after death. The student does clinical and pathological work at different times; and he is enabled to follow the case straight from the ward to the laboratory. He consider-

ed that study of the fresh specimen was the best; for the specimen taken from formalin was no more like the condition than canned salmon was like fresh-run fish. He would not hinder experimental research work; it was absolutely necessary. The life of a man was of more value than a sparrow or many guinea pigs. It would be almost impossible to overestimate the direct value of experimental laboratory work. Strumous and scrofulous are now terms devoid of meaning and we now call tubercle by its proper name. There are three great factors in connection with tuberculosis which the public must be made acquainted with: 1—The disease is communicable; but the public must be allowed a little time before they accept this statement and fact; 2—The disease is preventible; this follows almost as a corollary to the first statement; 3—The disease is curable. Years ago, one, the subject of tuberculosis was regarded as well nigh hopeless; but now we do not consider it of the untractable nature that it was formerly considered. Tuberculous lesions are exactly what they used to be; and Mr. Owen has worked at the largest children's hospital in London for over a quarter of a century. We now take a much more hopeful view of these lesions. Many of you have studied tuberculous lesions under these skies and also in the mother country. Do you find that the tuberculous lesions are the same in both hemispheres? One rarely hears now of the *vis medicatrix nature*; surgery has rendered it superfluous. All have noticed cases of old-standing hip joint disease where in time the boy actually grows out of his trouble. This may be a popular superstition, but like most erratic beliefs, it is founded upon a stratum of truth. In children these chronic diseases are always tuberculous. Where chronic abscesses occur, it will not do to open and drain, but they must be scraped out,—their unhealthy lining destroyed. In the treatment of these diseases, the learned surgeon stated that he had failed to find any virtue whatever in the employment of iodoform. It is an irritant and a poison, and it is apt to be septic as germs can grow on it. Mr. Owen condemned the employment of complicated apparatus and also the forcible correction in cases of spinal deformities. He considers that this deformity does not lend itself to operative treatment. There may perhaps be a small class of cases where it may eventually be found applicable, as where bone or organized inflammatory deposits press upon the cord so that the patient has lost movement in the lower extremities. The plaster of Paris jacket must be held responsible for much of the deformity of Pott's disease. The proper treatment of these cases is rest in the horizontal position, with plenty of good fresh air and sunlight. At the conclusion of his extremely able and instructing address the thanks of the Association were moved in a complimentary speech by Professor Shepherd, of Montreal, and seconded by Professor Cameron, of Toronto, put to the meeting by the president, unanimously carried amidst great enthusiasm, and appropriately presented to Mr. Owen by Dr. Powell. Mr. Owen made a happy reply.

Excision of the Knee Joint in Tuberculous Disease.

Professor Primrose, of Toronto University, minutely described Kocher's method of dealing with tuberculous disease of the knee joint,

and recited the histories of a few cases in which he had obtained excellent results where this operation had been employed.

Recent Pathologic Studies of the Blood.

Dr. L. H. Warner, Brooklyn, N.Y., contributed a scientific paper with the above title. At the outset he asserted that he believed there was a necessity for experiments for the progress of pathology. His experimental researches were directed along three lines of enquiry, viz: Experiments, observation, and individual observation at clinics in hospitals. He considered that the examination of the blood in most cases was of more importance than an examination of the urine. Dr. Warner gave the formula of a new staining solution which he had found very practicable—The blood specimen should be prepared in the regular way. The slides are heated in a hot oven to 98 degrees. Immerse for one minute in a one per cent. aqueous solution of methylene blue, washing in water, then in a one per cent. alcoholic solution of eosin, washing again with water and then in a one per cent. solution of Bismarck brown. Dr. Warner's paper was illustrated with suitable diagrams.

Some Experiences in the Treatment of Hernias.

Dr. F. J. Shepherd, of Montreal, contributed the first paper at the morning session of the second day. He stated that it was now some twenty years ago since surgeons began to perform these operations by the open method. Older methods in vogue were touched upon and described; and he instanced one very large hernia which had come under his observation then, where the man could not put his trousers on. The methods of operation are almost as numerous as surgeons, but there are certain general principles underlying all operations: 1—The necessity for excision or obliteration of the sac; 2—Closure of the canal; 3—Union by first intention. Some also hold that alteration in the direction of the canal is necessary. The operation performed by Dr. Shepherd is Bassini's, but even with it he is not always successful. He has used all kinds of sutures. Absorbable sutures are the best and if antiseptic they are to be preferred. A suture that will last for three weeks is all that is wanted. He has used chromicized catgut now for some time. Professor Shepherd never washes out the wound and thinks it better to dissect out the sac with the knife than to tear it with the fingers. He never uses a drain. For the past two years he has used rubber gloves in all his abdominal work and he considers that he has got better results since beginning their use. In these operations the mortality is practically nil. Operations on children are now our most successful cases; formerly they were not advised except in strangulated cases.

Dr. Laphorn Smith discussed this paper and the cases described, although his experience lay mostly in ventral and umbilical work. In some of these he had seen them so large as to require twenty stitches. During the past two years he has abandoned silk and resorted to catgut, chromicized, which he always prepares himself.

Dr. Shepherd stated if there was any oozing in the wound he would pass a probe in between the edges to let out the accumulated serum. This

he finds to be quite efficacious, as then you minimize the chance of the introduction of any germs from without.

A Case of Syphilitic Gummata of the Spinal Cord successfully treated by enormous Doses of Iodide of Potash.

The history of this interesting case was reported by Dr. F. W. Campbell, Montreal. It occurred in a man of highly neurotic temperament who a short time before the onset of symptoms of a definite character, had suffered from repeated attacks of insomnia of a very aggravated character. When this sickness began, there were noticed retention of urine and loss of power in the lower limbs. The patellar reflex was about normal. The loss of power in the lower limbs was absolute. The pulse varied from 80 to 96; the temperature never above 99. The stomach remained in fairly good condition all the time. A consultant from New York was brought on and a diagnosis established of tumor of the spinal cord situated about the first lumbar vertebra which might be sarcomatous or syphilitic. The advice of the consultant was to give 500 grains of iodide of potash per day, commencing with drachm doses three times a day. Dr. Campbell detailed minutely the daily history of the patient while getting him under the large dose and then again whilst it was gradually being withdrawn. The patient is alive to-day and in good health, having recovered complete control of his lower extremities.

Address in Gynecology.

Dr. William Gardner of Montreal delivered a very practical address on the mistakes in midwifery and also in gynecology. He stated that we often learn more from our mistakes than from our successes. Correct and accurate diagnosis depends mainly upon our sense of touch, which can only be attained by long and patient practice. He referred to the advantages of examining the patient on a plain table instead of on a couch or bed. The patient's rectum should always have been emptied before presenting for examination. As for the bladder, it is best for the physician to empty that viscus for himself, per catheter, when the patient is on the table, as in this way you will be able to notice any discharges etc. That the physician will have to do this often is quite clear from the fact that there are many women of a nervous temperament who would not be able to empty the bladder voluntarily in the physician's office. Another advantage of doing this for yourself is that you get an uncontaminated specimen for examination. In cases where tension is present in the abdominal muscles, if you make a series of circular movements over the lower abdomen, gradually narrowing your circle, you will be able to overcome whatever rigidity there may be present. Dr. Gardner urged caution in the use of the uterine sound. He rather considers it a dangerous instrument, and that its use ought to be extremely limited. He holds the opinion that many women have lost their lives through this instrument. Then there is the danger and risk of infecting and injuring the uterine canal. The uterine sound is a great deal too much employed by the general practitioner. Mistakes in diagnosing displacements of the uterine body, he considers the most common. The uterus is a very movable

organ and a distended rectum or bladder may cause it to be diagnosed as a retroversion. Then it is important to remember that it may be displaced through acts of coughing, vomiting etc. In all examinations of the pelvic organs, Dr. Gardner has made it a point to examine the position of the kidneys as well. Referring to examination by the Sim's method, it is necessary to have the patient in the proper position; and if you have not got a Sim's speculum, a bent table fork or the finger of the opposite hand may be used to distend the perineum. Mistakes are often made in the diagnosis of pregnancy; but still the patients are few in whom the diagnosis cannot be made by careful examination of history, signs etc. Many women are probably inaccurate as to date. Dr. Gardner illustrated his points as he proceeded by reciting cases. One in particular he instanced where he once found a woman in his office on her hands and knees in the throes of a twin pregnancy, which a fellow practitioner had failed to recognize and had tapped the gravid uterus and had drawn off a quantity of the liquor amnii. He also referred to the mistakes made by himself as well as by his brother practitioner. The close of the paper referred to an interesting account of the mistakes which had occurred in diagnosing extra-uterine pregnancy. The Association voted him an unanimous vote of thanks for his exceedingly practical paper.

An Unnoticed Factor in the Production of Abdominal and Pelvic Disturbances in Women.

Dr. Clarence Webster, Chicago, contributed an original paper on the above subject. Symptomatology in women, he said, was often overlooked by the general practitioner. The question of the moral relationship of the abdominal and pelvic contents was dwelt upon and then he proceeded to account for inter-abdominal pressure. He held the view that the pelvic organs as well as the abdominal were to a large extent held in their respective positions by reason of the pressure of the abdominal and pelvic walls. He stated the average sp. gr. of the viscera to be a little more than that of water; the liver was 1.5 sp. gr. He maintained that there was no proof that the mesenteries acted as constant supports or were ever meant to be such. The main factor in restraining the viscera is the strength of the abdominal wall and pelvic floor. Local weakness of the abdominal wall has been fairly well described under hernia; while general weakness of the abdominal wall has been described as pendulous belly. General weakness in his experience is an exceedingly rare condition. As to the question of etiology, the condition is found in women who have borne children; and so, on examination of the great majority of women, there is found some degree of separation of the recti muscles in the region of the navel. All evidence later on may disappear, but permanent widening remains. The results of all this is unavoidable enteroptosis; and this is generally found in women who have been addicted to the pernicious habit of tight lacing. A very common displacement seen is that of the right kidney. Dr. Webster dwelt upon the diagnostic symptoms of these conditions and then proceeded to describe the operation he performs for their relief. This consists in bringing the edges of the two recti muscles into apposition. He first performed this operation

in Nov. 98. Since that time he has operated on forty-one cases and the results have been most satisfactory in all.

Mr. I. H. Cameron took exception to the word "unnoticed" in the title of Dr. Webster's paper, as he thought that this was not an unknown factor in the production of the conditions mentioned in the paper.

Dr. W. S. Muir, Truro, N. S., asked what effect leaving off the use of the binder after confinement had to do with the production of these conditions.

Dr. Webster held to the opinion that this had not been noticed except by himself and challenged Dr. Cameron to produce evidence to the contrary. The absence of the binder, in his opinion, had not made any special difference.

Address in Medicine.

This was delivered by Professor Shattuck of Harvard, who said in his opening remarks that the advance in knowledge had brought about our relation to things in general. There is noticed at the present day a subdivision in labor in every branch of industry. As a consequence, specialization has taken place in the science and art of medicine. In specialization lies the cleavage between medicine and surgery; and no where has the line been more closely drawn than in England. Anesthesia greatly enlarged the bounds of surgery. Twenty-five years ago there was not a pure surgeon in America. Bellyache is now a surgical disease. The heart is practically the only viscus which remains the exclusive property of the physician; and he was not so sure that even this organ would soon be attacked, and we might yet hear of suturing of the mitral valves. In this country the general practitioner is clinging to obstetrics for family practice. In some of the larger centres, there is now even a tendency to specialism in obstetrics, where the specialist will preside at the accouchment, and the family practitioner then step in to oversee the attendance throughout the puerperium. Pure gynecology scarcely exists to day; and pelvic tinkering is suffering from a rapid decline. The great bulk of major gynecology is nothing more than abdominal surgery, which properly belongs to the general surgeon. Gynecologists should study general surgery and become general surgeons first. The field in medicine is so large that no one man can grasp it all in a lifetime. Other specialties were also referred to, such as neurology and dermatology. The desire on the part of some to escape the hurly-burly of general practice may be a cause in throwing them into special lines; and then there is the fact that special knowledge draws larger fees. Ophthalmologists get more for removing a speck of dust from the eye than the general practitioner. When we have specialists for diseases of the young, why not also have a specialty for diseases of the old. In the belief of the distinguished professor from Harvard, specialism had come to stay. The gathering was exceedingly delighted with the deliverance of Dr. Shattuck and at the close voted him a cordial vote of thanks, to which he made an appropriate reply.

Gastric Hemorrhage.

Dr. George E. Armstrong of Montreal contributed this paper. He believed there was a fairly well determined field in which surgical inter-

ference may be of use in hemorrhage of the stomach. Hemorrhage occurs in fifty per cent. of gastric ulcers and is fatal in eight per cent. Cases are arranged in two groups, the acute and the chronic. Rodman has reported thirty-one operations for frequently occurring or chronic hemorrhage, with six deaths. Dr. Armstrong has operated five times for gastric hemorrhage, one being a chronic case. In one of these the patient was getting along nicely after the operation when she expired suddenly; and on a post mortem examination being made, thrombi were found in the branches of the pulmonary artery.

Some cases of Stomach Surgery—Gastrostomies, two cases; Gastroenterostomies, two cases; Pylorotomy.

Dr. A. E. Garrow, Montreal, reported these cases. In one patient operated on, the patient was fed before he left the operating table. Another, a woman of fifty years who had a persistent hacking cough had gastrostomy performed and discharged able to feed herself through a tube. In another case, in a man aged 38 years, who had vomiting and blood in the stools, the patient had acute pain suddenly and a pale face. Duodenal perforation was present; and when the abdomen was opened gas escaped from the incision. When discharged on July 24th last, he was feeling well. Six cases were reported.

The modern treatment of Retroversion and Prolapse of the Uterus.

This was the title of an able paper presented by Dr. A. Laphorn Smith. It referred to the proper and most successful management of procidentia uteri in elderly women between seventy and seventy-five years of age,—a most pitiable condition. Except for this trouble she may be otherwise in excellent health; the perineum, however, is so relaxed that no pessary will remain in place. Then the majority of these cases had an ulcerated cervix. After confinement the uterus remained large and the pernicious habit of keeping women too long on their backs has a tendency to produce the backward displacement. Dr. Smith feels certain that women who have been relieved of this distressing condition will have little difficulty in persuading others to avail themselves of the treatment. He removed a woman's uterus a few months ago, which had been out of her body for twenty years, and the woman now assures him that she feels like a young woman. In correcting this deformity Dr. Smith makes a small incision in the abdomen and performs ventro-fixation. After that the vaginal canal is narrowed by a large anterior and posterior colporrhaphy. In selected cases he also amputates the lower half of the organ, and then stitches the vagina to the upper half. He considers ventro fixation, if properly performed, a most reliable means of fixing up the uterus. The operation has given him the most complete satisfaction of any operation he has ever performed, especially when combined with amputation of the cervix and posterior colporrhaphy.

Gasoline as a Surgical Detergent.

Dr. Bruce L. Riordan, Toronto, contributed an interesting paper on this topic. With this, the dirty, greasy hands of machinists, who are the subjects of injuries in these parts can be effectively and rapidly cleaned

without the ordinary brush and soap and water. It is far better for this purpose than any method heretofore devised for cleansing. He now constantly carried a small bottle of gasoline in his surgical bag. A report from Dr. Wm. Goldie, Toronto University, showed its effect upon germs and germ life, a report which would conduce to its employment as indicated. One word of caution was thrown out by Dr. Riordan in its use: as it is a highly inflammable substance, it should not be used in any quantity near an exposed light; and then it is painful in the eyes or ears. It is also useful in cleansing sutures of accumulated serum, blood and dressing powder as it frees these particles and enables one to locate the stitches easier and quicker.

Dr. J. C. Mitchell, Enniskillen, Ont., stated that he had tried gasoline recently as a detergent in two very severe threshing-machine injuries, where the parts were all smeared over with oil and grease and dirt; and it was very satisfactory, as he was able to get perfect cleanliness in a very short time, both wounds healing by first intention.

Dilatation and Prolapse of the Stomach.

Professor Alexander McPhedran of Toronto University presented this paper, which dealt principally with prolapse. This condition rarely occurs alone, but is associated with prolapse of other abdominal organs. There is generally present as well, some degree of dilatation; and the abdomen may be prominent or flat, or even retracted. The case of a man aged fifty-one years was referred to, a manufacturer who had been ailing for two or three years. The stomach was below the umbilicus. He was directed to massage the abdomen very thoroughly and to practise abdominal gymnastics. Through this treatment, combined with dietetics and some strychnine, he has been restored to health and able to resume business. Another case of a woman aged thirty-five years was reported. This woman had been the subject of recurrent attacks of vomiting for two years. The symptoms were detailed; massage and abdominal gymnastics ordered with satisfactory results. The different ways of examining the stomach were described; and a change of scene in treating these patients was most beneficial.

Sir William Hingston discussed the paper at some length. He thanked professor McPhedran for having brought before the association so valuable a contribution, so interesting a subject. He said that as a surgeon he, Sir William, was reluctant to part with anything which might possibly belong to surgery,—but dilatation and prolapse of the stomach he thought properly belonged to medicine. The stomach in cases of dilatation is not usually the sinner, but the sinned against; and one must look for the cause of dilatation rather to the mouth and to the faulty mode of dealing with the food when there than to any viciousness in the organ chiefly affected. The common causes of dilatation of the stomach in his opinion are in brief, eating too much, eating too frequently, eating too fast, eating too great a variety of things (often incompatible with each other), gratifying the palate rather than supporting the strength, and lastly, drinking too much at or near the time of eating.

Physical Training: Its Range and Usefulness in Therapeutics.

Dr B. E. McKenzie of Toronto gave a very interesting account of the methods employed by him in correcting deformities in his orthopœdic hospital at Toronto. The paper was illustrated by lithographs showing improvements in spinal deformities after physical training in the direction indicated. The paper embraced the results of his observations for thirteen years past; and was ample justification of the benefits derived from gymnastics in the correction of lateral curvature, club feet, etc. He had also found physical training valuable in hysteria and chorea, especially the former.

Inter-Provincial Registration.

Dr. T. G. Roddick, M.P., read the report of the committee having this matter in hand. A new feature to be incorporated in the measure was that of allowing the homeopaths representation on the proposed Dominion Council, as according to the law of Ontario, these had their vested rights in that province, and so must be accorded similar interests in any proposed Dominion Council. These will be allowed three representatives, which will be equivalent to the representation from any one province of the Dominion. Their term of office will be for four years. Homeopathy, however, as such, will not be inserted in the measure, but will be classified under, "any other school of medicine having legal recognition in any of the provinces of Canada," as the British Medical Council would not recognize any such body. Dr. Roddick stated that the Bill would be introduced at the next session; and advised the members of the committee from each province to bestir themselves before their respective provincial parliaments, as these bodies must sanction the measure before it can be finally acted upon by the Dominion Parliament.

Cerebral Abscess.

Dr. James Stewart, Montreal, reported two very interesting cases of abscess of the brain situated in the temporo-sphenoidal lobe, and referred to the unusual existing aphasia which was present in both cases, viz., simple inability to name objects. The first case occurred in a young man of twenty-two years who had an otitis media following an attack of influenza. Some six weeks afterwards an abscess formed which was diagnosed as being confined to this area simply on account of the peculiar aphasia,—the simple inability to give the name of a pen or other object when held up to him. The patient was operated upon by Professor Bell, who secured two ounces of pus. Meningitis, however, set in and the patient died. The second case was a girl of 22 years of age. She had had ear trouble for a great many years, with very severe pain at times. She too, had difficulty in naming objects; and she could not name any object whatever finally. She died suddenly a few hours before the operation was to be performed for her relief. On opening the skull at the post mortem two abscesses were found, one skirting the upper margin of the lobe and the other situated about the centre thereof.

In reply to a question of the president, whether we were to take this kind of aphasia as a distinct diagnostic symptom of abscess of that region,

Professor Stewart stated, there is what they call a "naming centre" and when that is destroyed, this particular form of speech defect is present. The cases were illustrated by a diagram.

Gangrene of the Leg Following Typhoid Fever.

Dr. H. H. Chown, Winnipeg, reported two cases of gangrene of the leg following typhoid fever, which had recently come under his observation. In the first case the patient had the classical symptoms of typhoid fever, the spots appearing at the end of the first week and being very numerous. Great pain set in in the calf of the leg, with collapse symptoms, while the limb was cold and bloodless. Cutaneous sensibility was lost over the leg. The third day after the complication set in, the part involved included the lower third of the leg on the inner side and the lower half on the outer. Amputation was performed at the junction of the upper and middle third of the femur. Patient stood the operation well. The temperature before the operation was 102.6; pulse 120. On the following day the temperature was normal and the pulse 110. On the tenth day the flaps were united. There was a rise of temperature a few days later—a relapse, with hypostatic congestion of the lungs. On the fifth day after there was hemorrhage of the bowels. The patient is now the picture of health, weighing 200 lbs. The second was a somewhat similar case in which the blood re-acted early and promptly to the Widal test. The gangrene began in the first case on the 11th day; in the second on the 9th. Keen reports gangrene on the 14th day. The gangrene in the second case extended to the upper and middle third of the leg. The leg was amputated and prompt union took place throughout.

Dr. R. B. Nevitt, Toronto, discussed these cases and mentioned a similar one coming under his observation during the past summer. Gangrene occurred in his case about the third week of the fever, and the patient was seen about a week or ten days thereafter. Amputation was performed through the middle third of the femur. He also referred to a case of gangrene of the arm following an attack of pneumonia, recently observed by him.

Notes on Atropine.

Dr. R. D. Rudolf, of Toronto, contributed a very interesting paper on the above subject. He illustrated by means of a chart the action of the drug on animals and the inferences drawn therefrom of its therapeutic uses. He finds that the drug directly stimulates the heart and thus the blood pressure is markedly raised. He considered that the maximum single dose as laid down by Witherstine of 1-20th of a grain as too large unless used as an antidote; and thinks that we ought never to give more than 1-100th of a gr. of atropine sulphate at one time except in emergencies. He also referred to its action in catarrhal pneumonia of children and its employment before anesthesia to ward off danger.

The paper was discussed by Dr. A. D. Blackader who congratulated Dr. Rudolf upon it and said that he hoped he would pursue his studies on the subject still further. He considered that strychnine and not atropine was the most powerful heart tonic in our possession. He thought that

late experiments would throw doubt upon atropine being a direct stimulant to the heart muscle; and he would consider it questionable practice to administer a drug when we wanted to stimulate the heart's action that would paralyze the nerve endings.

Lantern Slide Demonstration of Skin Diseases.

Dr. George H. Fox, of New York City, conducted this demonstration. The great majority of the skin lesions shown were of syphilitic origin; and as they appeared on the canvas, Dr. Fox described their histories. One in particular is remembered from the disfigurement of the woman's face. There was a large mass of excrescences on the nose, which Dr. Fox was successful in getting rid of in the course of two or three months, leaving only a slight superficial scar. He laid down a timely word of caution in treating syphilitic conditions, that when the patient was run down and emaciated through large doses of mercury or iodide of potash, not to keep on pushing these drugs, but to desist for a time, and in the interval endeavor to build up the patient's strength and general condition. When that was accomplished, return to the specific treatment, and the results would be found to be more beneficial. At the conclusion of the doctor's demonstration, a vote of thanks was accorded him for his instructing demonstration.

Dr. F. J. Shepherd showed a very interesting case, a boy of sixteen years, who at the age of six sustained a very severe cutting injury of the nerves and vessels of the axilla, all the nerves below the cords of the brachial plexus being cut completely through. At that time, ten years ago, Dr. Shepherd dissected out each nerve separately and united their respective ends by suture. All did well with the exception of the musculo-spiral, and as a consequence of this the lad has no control over the extensors of the fore-arm.

The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodide of Potash Internally and Pilocarpine Hypodermically.

Dr. G. H. Burnham, Toronto, reported two cases successfully treated by his combined method. Under this method no such result follows in other plans of treatment, and with this plan a permanent result is got. This treatment has a wide application. Whether iodide of potash or mercury or the iodide alone be given internally, in suitable cases without satisfactory results, if the pilocarpine be added, good results will always follow.

Mental Sanitation.

Dr. R. W. Bruce Smith, of the Brockville Asylum, contributed the last paper. It was a plea for prophylaxis in insanity, and he thought that much would be accomplished in this direction during the twentieth century. Insanity was on the increase in Canada, and it can be ascribed to the fact that while those unfortunates are well taken care of when they become insane, the fact that there have been no preventive measures employed speaks for itself. In order to accomplish good in this direction,

we must seek either to lessen the demands on, or to strengthen the resisting power of the brain. He condemned inter-marriages in families and also amongst those of a deranged mentality. Fifty per cent. of the cases of insanity were hereditary and the descendants of these should be careful in contracting marriage ties. He referred to a portion of one county in Ontario alone, where indiscriminate marriage and inter-marriage has become most fruitful; and he has seen several members of one family from that locality inmates of the same institution at the same time. He considers that the day may yet dawn when we will give the same attention to the rearing of children as we now do to the breeding of horses. Speak of farm life and the tendency it has to melancholy, he thought this class of the community should receive education in participating more in the enjoyments of life and not to continue to rot in domesticity. An upheaval in the sentiment and surroundings of the rural homes would work wonders in prophylactic principles.

The Canadian Medical Association endorsed the scheme for a Dominion Anti-Consumptive League, and the following recommended as provisional officers:—Honorary President, His Excellency, Lord Minto; President, Sir James Grant, Ottawa; secretaries, to be the secretaries of the different provincial boards of health. Secretary-Organizer, Rev. Dr. Eby, Toronto; Treasurer, J. M. Courtney, Esquire.

The Association also recommended the formation of a Medical Defence Association and appointed Dr. V. H. Moore, of Brockville, as permanent chairman to work up the scheme.

The treasurer's report showed that 153 members had been in attendance and that there was a balance of \$240.65.

Election of Officers.

President, H. H. Chown, Winnipeg. Vice-Presidents for the provinces as follows:—P. E. I., H. D. Johnson, Charlottetown; Nova Scotia, A. J. Maiter, Halifax; New Brunswick, T. D. Walker, St. John; Quebec, A. Laphorn Smith, Montreal; Ontario, A. A. Macdonald, Toronto; Manitoba, J. A. Macdonald, Brandon; N. W. T., J. D. Lafferty, Calgary; British Columbia, S. J. Trinstil, Vancouver. Treasurer, H. B. Small, Ottawa; General Secretary, F. N. G. Starr, Toronto. Next place of meeting, Winnipeg.

Sir Wm. Hingston and Dr. F. W. Campbell, Montreal, were appointed on the board of governors of the Victorian Order of Nurses.

MISCELLANEOUS.

Spinal Anesthesia.

Perhaps the recent researches of Tuffier of Paris will mark the dawn of the ideal anesthetic era. Certainly this method, which is now shown to have been demonstrated by the American, Dr. Corning, has taken a firm hold on the medical mind, and may eventually lead to the abandonment of the inhalation anesthetics. As now practiced, its facility and innocuousness seem far to counterbalance the transient discomforts and bad effects of the drug. In Tuffier's experience of two hundred cases there has never been a failure to get complete anesthesia, and in no case has there been a serious accident; and this has been the verdict of all who have used this method.

Emesis was present in a large majority of the cases, while headache occurs more frequently, but not often of a severe nature; both of these symptoms are transient. In a certain small proportion of the patients an evening rise of temperature has been noted, and in some profuse sweats, but the following course has been normal. These minor drawbacks do not seem so bad, when we consider what so frequently happens after an ether or a chloroform anesthesia, and the great advantage of no post-operative pneumonia is incalculable.

With the injection of one c. c. of a two per cent. solution of cocain into the subachnoid space there is a complete loss of pain sense below the diaphragm, with no loss of consciousness or tactile sensibility, the motor power being slightly impaired and the intestinal reflexes continuing; this happens within ten minutes after the inoculation. All operations below the diaphragm are then possible without any discomfort to the patient, and can be prolonged for at least two hours before the anesthesia is lost. Under this method such large procedures as hysterectomies, nephrectomies, gall bladder operations and hip-joint operations are possible; in fact, no operation below the costal margin has yet been found impossible.

Kreis and Bumm have made use of this method in obstetric practice, and find that the labors continue normal, without any suffering on the part of the patient. In this country, Murphy of Chicago and Matas of New Orleans have used the subachnoid injection of cocain with most satisfactory results. Certainly the dangers connected are not great, and and in many instances this would seem to be the method of election. It has the advantage over the infiltration method of not requiring the same amount of skill, and not handicapping the operator with the worry of attending the patient.

Of course, it will be years before the ulterior effects of the injection will be determined; perhaps they will be nil. In any event, the method merits careful and systematic investigation and possible adoption.

However, we must urge a word of caution against the indiscriminate and unintelligent use of this method of anesthesia. Simple as it is, there is ample opportunity for injury and infection arising from the puncture, especially in inexperienced and careless hands. Let us not overdo this plan of anesthesia so that the public will discredit before it has a fair trial.—*Ed. St. Louis Med. Review.*

The use of Adrenal Substance in the Treatment of Asthma.

Cohen writes in the *Journal of the American Medical Association* of May 12, 1900, that we have in this substance a decided addition to therapeutic resources—quite active when used locally, and hence to be remembered in the prompt treatment of urticaria or edema of the upper air-passages; and less active, but still definitely useful, by internal administration in controlling urticaria or circumscribed edema or similar conditions affecting the bronchial mucosa.

It is not a specific for asthma. It is without good influence, perhaps capable of bad influence, on cases that are really spasmodic—that is, due to contraction of the bronchial muscles. But it is of definite use in that perhaps smaller number of cases of asthma in which the paroxysm is but one other manifestation of a congenital fault of structure or of metabolism, affecting the vasomotor system, and thus permitting the cardiovascular balance, and especially the tonicity of the blood-vessels, to be readily overturned by exciting causes that would have but slight, if any, effect on other individuals. In such cases a more or less continuous administration of adrenal substance, in sufficient quantity to maintain the vascular tone, will act as a preventive, enabling the reactive forces of the individual to combat more successfully the toxins of internal and external origin, the emotional, meteorologic, thermal, and climatic influences, and other sources of disturbance that ordinarily provoke the paroxysm.

As to its dosage, the rule is that of Prof. Ellerslie Wallace, for bleeding in puerperal eclampsia—"Enough." There is great difference in cases and in individuals. Beginning with small doses frequently repeated—*e.g.*, one grain every hour or every two hours—or with a moderate dose, say five grains, once or twice daily, we learn the tolerance of the individual, the tractability or intractability of the symptoms, and regulate accordingly. Cohen has given as few as three and as many as ninety grains of the desiccated gland substance in the twenty-four hours. Five or ten grains every second or third hour during waking hours is a fair dose. In some cases, however, the unnecessary animal substance retained in the preparation gives rise to diarrhea with offensive discharges. If we could have the active agent alone our therapy would be much more definite.

What the active agent is, and how much or how little of that active agent is absorbed, Cohen leaves to laboratory students to determine. Clinically, he has watched closely and critically enough to satisfy himself that neither the susceptibility of patients to suggestion nor the activity of the observer's imagination is sufficient in itself to account for the whole of the results.—*Therapeutic Gazette.*

PUERPERAL ECLAMPSIA. In his experience, says J. B. Todd (Philadelphia Medical Journal, August 11, 1900), cephalgia is the danger signal of coming eclampsia. A woman may have slight albuminuria and recover under proper treatment, but if during labor and for two days afterward the patient complains of severe pain in the head, there is danger of eclampsia. The writer does not rely in treatment on diuretics, especially digitalis and potassium acetate, as they depress the heart and do not eliminate the urea. He believes hydragogue cathartics are required for this purpose, and uses elaterium because it can be depended upon to produce a thorough action. Following the administration of the hydragogue he gives iron and mercuric chloride, as follows:

R Tr. ferri chlor. ʒi
 Hydr. bichlor. gr. i.
 Ft. sol. Sig. gtts. xii in a capsule every four hours.

The writer believes that morphine is *the* drug to control the convulsions, provided it is given in sufficiently large doses. He gives from one-half to one and one-half grains hypodermatically, and repeats the dose whenever, and as often as, the patient complains of severe pain in the head, whether it has been one hour or longer since the last dose was given. Todd reports ten cases treated in this manner and sums up the results as follows: In six cases after labor there was a single convulsion; all recovered. Of two cases with convulsions during labor, one had a single convulsion and the other several. Both mothers and children lived. In one case with convulsions in the second month of pregnancy, the patient carried the fetus four months without any inconvenience. In the tenth case, abandoned by an eclectic physician, death ensued before the remedies could act.—*Medical News*.

Chronic Urethritis.

R	Iodi	3 (gr. v.)
	Potass. iod. 2	(gr. xxx.)
	Ol. oliv. 2	(ʒ ss.)
	Lanolini q s. ad. 30	(ʒ i.)

M.S. Use to anoint a steel bougie.

—*Medical Record*.

THE TREATMENT OF MUCO-MEMBRANOUS COLITIS OF CHILDREN. The *Journal des Practiciens* for June 9 says that in chronic colitis of children with habitual constipation, shedding of the mucous membrane, a form of colitis which commonly succeeds the acute forms, the treatment is the same as for adults: Intestinal lavage, oily injections, castor oil in small or large doses, and calomel occasionally. Henoch prescribes:

R	Hydrochloric acid.....	5	(7½ grains.)
	Distilled water.....100	|	(1,500 “
	Gum arabic.....1	|	(15 “
	Syrup of althæa.....20	|	(300 “
	Thebaic tincture.....	2	(2 to 4 drops.)

M. A coffee or dessert spoonful three or four times daily.

—*New York Medical Journal.*

Neurasthenia.

R	Zinci bromidi.....	|	(gr. xv.)
	Zinci valerianatis.....		
	Zinci oxidi.....āā		
	Rosæ conserv.....		

M. ft. pil. No. xx.

S. One before breakfast, dinner and bedtime.

—*Medical Record.*

Hair Tonic.

R	Pilocarpin. hydrochlorat.....	gr. v.
	Otto. rosæ.....	℥ viij.
	Ol. rosmarini,	
	Lin. cantharidis.....	āā ʒiv.
	Glycerini puri.....	ʒj.
	Ol. amygdalæ dulc.,	
	Spir. camphoræ.....	āā ʒiij.

M. Sig. Rub well in, morning and night.

—WHITLA.

Phthisical Cough.

R	Codein.....	gr. iv.
	Ac. hydrochl. dil.	ʒss.
	Spir. chloroformi.....	ʒiss.
	Syr. limonis.....	ʒj.
	Aquam.....	ad ʒiv.

M. ft. emuls. Sig. Teaspoonful at frequent intervals.

—MURRELL.

Amenorrhœa in debilitated and anemic states.

R	Hydrarg. chl. corros.,	
	Sodii arsenit.,	
	Strych. sulphat.....	āā gr. j.
	Potass. carbonat.,	
	Ferri sulph.....	āā gr. xxx.

M. ft. pil. No. lx. Sig. One after each meal. —LUTAUD.

—*St. Louis Medical and Surgical Journal.*

To COOL WATER when ice cannot be obtained, wrap the pitcher in cheese-cloth previously impregnated with ammonium nitrate and dried. Moisten slightly at time of use, dry and use again.

—*Medical Record.*

AN AFRICAN REMEDY FOR DYSENTERY. The Kafirs and Zulus make use of the root of the geranium, of which there is said to be a number of varieties, all, however, of equal therapeutic efficacy, in South Africa, in the treatment of dysentery. They simply chew the root, but the British Army surgeons give it in the form of a decoction in milk. The remedy is reported by those who have employed it to be a real specific, no failure to cure within thirty-six or forty-eight hours being recorded.—*Medical Record.*

NEW LOCAL ANESTHETIC FOR THE EAR. Aqueous solution of cocaine and eucaine having proved so unsatisfactory when applied to the tympanic membrane as anesthetics, the use of aniline oil and alcohol as vehicles, as first tried by Albert A. Gray, should prove a boon to aurist and patient, as paracentesis is stated to be entirely painless five minutes after the anesthetic is employed. Ten drops of the following preparation are injected into the external auditory canal and allowed to flow to the membrane :

R	Hydrochlorate of cocaine	5 parts.
	Dilute alcohol	50 "
	Aniline oil	50 "
M.		

Granulations of the tympanum can also be removed painlessly, first cleansing and drying the parts before using the solution. In case of thickened and hardened membranes, the following formula is more effective :

R	Hydrochlorate of cocaine	10 parts.
	Absolute alcohol	30 "
	Aniline oil	70 "
M.		— <i>Med. News.</i>

THERAPEUTIC HINTS FROM THE *Medical Record* :*Epileptiform Convulsions due to Auto-intoxication.*

- R Ext. chirettæ gr. ij.
 Leptandrin gr. ss.
 Podophyllin gr. ½.
 Euonymin,
 Creosote (beechwood) āā gr. ss.
 M. ft. pil. No. 1. Sig. One such after each meal.

—HARE.

Tooth Powder.

- R Pulverized cereal 75 parts.
 Sodium borate 18 "
 Potassium chlorate 7 "
 Saccharin q. s.
 Flavor to taste.

—FLETCHER.

Seminal Emissions without marked erection.

- R Strychninæ sulph gr. j.
 Ac. phosphoric dil ʒij.
 M. Sig. Gtt. xxv. in water after meals.

—B. K. TWITCHELL.

Smoker's Gingivitis.

- R Salol 1.
 Tinct. catechu 4.
 Spt. menth. pip ad 120.
 M. ft. lotio. Sig. Teaspoonful in half a glass of tepid
 water as mouth wash.

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion: Established 1867.

Published on the 15th of each Month.

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All Communications in reference to the Literary part of the Journal, articles for publication, etc., address The Editor, 241 Wellesley Street, Toronto. Correspondence in reference to Advertising, Subscriptions, Publishers Department, etc., address Dr. G. P. Sylvester, Business Manager.

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EDITORIAL.

IODOFORM IN SURGICAL PRACTICE.

The crusade against the use of iodoform in surgical practice begun some time ago appears to be gaining strength. Those who oppose its use claim that it frequently produces grave toxic symptoms from absorption, that it is a local irritant and thus retards healing, that far from being germicidal, organisms flourish in it, that its offensive odor makes it 'socially disagreeable,' and finally that wounds heal quite as well or better without it, so that no good reason remains why such an expensive and apparently useless drug should form part of the surgeon's armamentarium.

Brush (Journal of the American Medical Association, Dec. 1899) set out to ascertain the opinions of leading surgeons as to the value of iodoform in practice. Of eighty-four replying to his questions, thirty-seven thought the drug could be abolished without detriment to surgery, while the remaining forty-seven thought there might be some loss, particularly in the treatment of tuberculous diseases. Even in these cases—the last

stronghold of the champions of the drug, we have Mr. Edmund Owen, in the address in Surgery before the Canadian Medical Association, say that he has failed to discover that iodoform has any peculiar merit in the treatment of tuberculous lesions, and that his results are no worse since he discarded its use.

As surgeons have come to study more carefully the process of healing of wounds, the more clearly does it appear that antiseptics and germicides play a much less important rôle in successful management than was at one time attributed to them. With absolute cleanliness, to obtain which antiseptics may be of use, and rest, Nature does the healing without the necessity of artificial aid. This fuller knowledge of surgical pathology is responsible for the breaking of another idol.

ANAESTHESIA BY SPINAL SUBARACHNOID INJECTIONS OF COCAINE.

Professor Tuffier of Paris (*La Semaine Médicale*), reports sixty-three operations on the lower parts of the body—lower extremities, rectum, abdomen and genito-urinary organs—including amputations and hysterectomy, in which efficient analgesia was obtained by injecting 1 c. c. of a two per cent. solution of cocaine into the subarachnoid space in the lumbar region of the cord. Dr. Tuffier used a needle $3\frac{1}{2}$ in. in length, the bevelled point being short. After careful preparation of the patient, who assumes the sitting posture, and after thorough sterilization of the solution to be used, the needle is introduced just beneath the spine of the fifth lumbar vertebra and the fluid slowly injected into the subarachnoid space. The anaesthesia begins in about ten minutes and extends upwards as high as the thorax, lasting for about an hour and a half. Certain symptoms, such as nausea, vomiting, epigastric depression, headache, with dilated pupils and rapid pulse, may supervene, followed by an evanescent rise of temperature; but no fatal or even serious complications have yet occurred. By Prof. Tuffier's method, analgesia sufficient to allow any operation below the diaphragm may be obtained, the patient remaining perfectly conscious. If continued experience shows the method to be devoid of danger and the technique sufficiently simple, there is a wide range of surgery in which it is applicable. It certainly opens up a new and important field for investigation in the search for a perfectly safe and satisfactory means of producing surgical anaesthesia, and further reports on the subject will be anticipated with much interest. While no fatal cases have been reported, the symptoms mentioned as following the injection are sufficiently startling to make most operators hesitate to employ it until the effects are more definitely and thoroughly understood.

CANADIAN MEDICAL ASSOCIATION.

The thirty-third annual meeting of the Canadian Medical Association was held in Ottawa on Sept. 12th, 13th and 14th, with about one hundred and seventy-five members in attendance. The profession of the Capital spared nothing in preparing for the reception of visiting members, whom they entertained royally. The complimentary dinner at the Russel House, given by the local profession, was a very enjoyable social feature of the meeting. The attendance at the various sessions of the association was fairly good, many of the papers under discussion being of more than ordinary interest.

To Dr. H. H. Chown, of Winnipeg, has fallen the honor of the presidency of the association for the ensuing year. Dr. Chown is well fitted for the duties of presiding officer and his election met with the general approval of the meeting. He should receive the united and hearty support of the profession in eastern Canada in making the coming meeting in Winnipeg worthy of the prairie metropolis.

EDITORIAL NOTES.

Sterilization of Catgut.

G. Brown Miller (Johns Hopkins Bulletin) considers that catgut is the cheapest and best absorbable material for sutures and ligatures. The only drawback is the difficulty of thorough sterilization. From a bacteriological examination of the materials prepared by various methods that have been recommended, he concludes that chemical agents must be considered unsatisfactory for this purpose. He found the Cumol method to produce absolutely sterile material and therefore was the one worthy of confidence. The details for preparation by this means, as carried out in the John Hopkin's Hospital, he gives as follows:—

"Cut the catgut into desirable lengths, 35-40 cm., wind it into small coils or rolls each containing eight to ten strands (It should not be tied or only loosely). It is then heated slowly (at least two hours) to 85° C. in a dry air sterilizer and kept at this temperature approximately for two hours. After thoroughly drying it is placed immediately in a metal vessel containing Cumol (which should cover the catgut), and this is heated over a sand bath to 160-165° C. and kept at this temperature for one hour. The Cumol is then decanted and the excess left in the catgut is evaporated by leaving the vessel over the sand bath for one hour longer, the flame having been removed. The rolls of catgut are then placed in

widemouthed sterile test tubes, a few rolls in each tube, and these are kept in a covered vessel and used as desired. A convenient apparatus has been devised by Clark which could be improved by leaving off the glass indicating tube. The principal points to be observed are as follows: the catgut must be perfectly dried before subjecting it to the high temperature of boiling Cumol, and care must be taken that the vapor of the Cumol, which is heavier than air, does not come into contact with the flame or red hot metal. If the catgut is not perfectly dried it will become brittle on boiling. To prevent the Cumol from taking fire the sand bath must be a wide one, extending at least 3-4 inches beyond the flame on all sides, and the vessel containing the Cumol should have a tightly fitting top with a corked opening for the thermometer, and an escape tube, by means of which the gaseous Cumol can be conducted away from the flame. Any device by which the vapor is prevented from rolling over the sides of the vessel will answer. It is well to place the catgut before drying in a suitable wire basket and surround it with filter paper. The basket with its contents is transferred from the drying apparatus to the Cumol. This device prevents the catgut from coming in contact with the sides of the metal vessel. The method of Cumol sterilization has been used for five years in the Gynecological Department of the Johns Hopkins Hospital with perfectly satisfactory clinical results. The objections to its use are the time and care required in carrying it out. The cost is relatively small, as very little Cumol is lost each time and the liquid can be used repeatedly."

American Public Health Association

The 28th Annual Meeting of the above association will be held in Indianapolis from Oct. 22nd to the 26th, under the Presidency of Dr. P. H. Bryce, of Toronto. A very extensive and excellent programme has been prepared for the meeting.

Illustrious Dead.

Several illustrious members of our profession have recently joined the silent majority—Dr. Lewis A. Sayre, the great American Orthopaedic Surgeon, Dr. Alfred Stille, Emeritus Professor of Medicine, University of Pennsylvania, Dr. Da Costa, author of the well known work on Physical Diagnosis, Dr. A. J. C. Skene, the Brooklyn Gynaecologist, and Dr. Hunter McGuire. It is fortunately rare that so many landmarks in the profession should pass away within so short a time.

PERSONAL.

Dr. W. C. Law, Beeton, is removing to Dauphin, Manitoba.

Dr. L. B. Ashton, (Trin. '00) is taking up practice at Quincy, Illinois.

Dr. H. J. Hamilton, Church St. has returned from a holiday on the Georgian Bay.

Dr. Howard Kelly, of Baltimore, was recently in Toronto, the guest of Dr. Sweetman.

Dr. W. S. Curran, of Detroit, (Trinity '99) was recently married to Miss Annie Fawcett, of Toronto.

Dr. Boyd Miller, a son of Ald. R. S. Miller, Owen Sound, has been appointed a United States surgeon in the Philippines.

Dr. E. A. Spilsbury, formerly lecturer on Laryngology and Rhinology, Trinity Medical College, has opened an office in Ottawa.

Dr. R. M. Mitchell (Trin. '92) has been appointed Dominion Land Agent at Weyburn, Assinaboia, where he is now practising.

Dr. Geo. Badgerow has sailed from New York on the R. M. S. Teutonic for England where he will spend some time in post graduate work.

Dr. W. T. Connell, Professor of Pathology, Queen's University, Kingston, was married on Sept. 19th to Miss Florence Ford of the same place.

Dr. Herbert Johnston, a former student at Trinity Medical College, and now practising at Anaheim, California, was married on Oct. 2nd to Miss Annie Wickett of Gifford St., Toronto.

Dr. Thos. S. Cullen, representative of the Johns Hopkins Hospital to the Medical Congress at the Paris Exposition, spent a few days visiting friends in Toronto on his way back to Baltimore.

Dr. A. T. Brousseau, Professor of Surgery in Laval University and Surgeon to Notre Dame Hospital, died in Montreal on Oct. 6. The deceased was one of the best known surgeons in Canada.

Mr. Edmund Owen, Surgeon to St. Mary's Hospital, London, who delivered the address in Surgery at the recent meeting of the Canadian Medical Association, spent a few days in Toronto, the guest of Mr. I. H. Cameron.

Dr. Ezra H. Stafford, formerly Medical Assistant at the Asylum for the Insane, Toronto, is spending a holiday in Toronto previous to going to the West Indies where he will spend the winter. Dr. Stafford is devoting much of his time to literary work.

Mr. A. H. Anderson, of the Royal Canadian Regiment of Infantry, a third year student in Trinity Medical College, was accorded a very warm reception by his fellow students on his return to Toronto last week. Mr. Anderson has completely recovered from an attack of enteric fever, contracted at Orange River.

Dr. Fife Fowler, who for about fifty years has been connected with the Medical Faculty of Queens University, has resigned his post as Professor of Medicine, though he will continue to act as Dean of the Faculty. Dr. Fowler has represented Queens University on the Medical Council of Ontario, and for many years has been one of the most prominent figures in the profession in the Province.

Dr. A. S. Tilley, of Bowmanville, was married on Oct. 10th to Miss Amelia Caroline Philip, daughter of Richard Philip, Esq. Wilcox St., Toronto. Dr. Tilley graduated at Trinity College in 1892, and served on the resident medical staff of the Toronto General Hospital in 1893, since which time he has been practising in Bowmanville with marked success. The Lancet offers its congratulations.

It is stated that Dr. Jas. Third, who recently retired from the position of superintendent of the Kingston General Hospital, will succeed Dr. Fowler in the chair of medicine. Dr. Third is a graduate and gold medalist of Trinity University (1891) and was at one time on the resident medical staff of the Toronto General Hospital. He did a successful general practice for some years in Trenton, going to Kingston some three years ago to take charge of the General Hospital there. Dr. Third has the reputation of being an excellent student and an able and popular teacher. We wish him success in his new post.

BOOK REVIEWS.

PROGRESSIVE MEDICINE, VOL. III, SEPTEMBER, 1900.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 408 pages, with 14 engravings. Lea Brothers & Co., Philadelphia and New York. Issued quarterly. Price \$10.00 per year.

The articles in this valuable digest are well worth study and will be found profitable, particularly to the general practitioner. The volume bears particularly upon medical subjects. Diseases of the thorax and its viscera, including heart, lungs and vessels, are dealt with by Wm. Ewart, M.D., F.R.C.P.; diseases of the skin by Stelwagin; diseases of the nervous system by Spiller of Philadelphia, and obstetrics by Norris of the University of Pennsylvania. In the latter article an appreciative and somewhat extended reference is made to a paper by Professor A. H. Wright of Toronto, in the *American Medical Quarterly*, Sept., 1899, with the title "Heart Disease from an Obstetrical Point of View."

To the practitioner in need of good medical society and unable by isolation or pressure of work to secure it, we heartily recommend this volume.

J. T. F.

DISEASES OF THE TONGUE. 2nd EDITION.

By Henry T. Butlin, F. R. C. S., D. C. L., Surgeon to St. Bartholomew's Hospital, &c., and Walter G. Spencer, M. S., M. B., (Lond.) Surgeon to the Westminster Hospital, &c. Illustrated with eight Chromolithographs and 36 engravings. Cassell & Co., Limited, London, New York, &c. J. A. Carveth & Co., Toronto, 1900.

The second edition of Mr. Butlin's work revised and enlarged has just made its appearance.

A chapter on the anatomy of the tongue by Walter G. Spencer has been added, which enhances the value of the work. Malformations of the tongue, wounds, burns, stings of insects, etc., are fully discussed.

An excellent chapter is devoted to the appearance of the tongue in various diseases and conditions. Glossitis in all its forms is fully dealt with, and the relation of chronic superficial glossitis to cancer pointed out. Ulcers of the tongue—simple, herpetic, tubercular, syphilitic and cancerous are fully described as are also the various tumors which may effect the organ. Cancer of the tongue receives especially full consideration.

The treatment of the various conditions—surgical and medical—is taken up in a thoroughly practical way. The illustrations are beautiful and add greatly to the value of the work.

Altogether this work is a most satisfactory one and will be an addition to any medical library.

H. B. A.

PUBLISHERS' DEPARTMENT.

DOES THIALION TAKE THE PLACE OF CALOMEL?

By R. A. MEATH, M. D.
Memphis, Tenn.

The following case has been of unusual interest to me inasmuch as it has developed a use for thialion which must prove of great value to every doctor practicing in malarial regions like the one where I reside. It is difficult for the physician not living in such places to realize the tremendous power exerted against the health of the community by malarial poisoning, which is always more or less associated with enlarged spleen, enlarged and torpid liver, together with constipated bowels.

Calomel has always been our mainstay, in fact it is impossible for us to practice medicine without it, with any degree of success. But it seems that in thialion we have a new remedy presented to us, which will not only cure constipation, relieve the torpidity of the liver, but also increase the activity and anti-malarial power of quinine.

I do not want to be misunderstood in this matter. I do not mean to say that two grains of quinine given with thialion is increased per se to 4 grains, but I do mean to say that by a thorough cleaning out of the liver, the reduction in size of the spleen, and the relief of the constipation, creates a condition by which the quinine is taken into the system more completely, more compactly, if I can so use the term, and is absorbed to a greater degree.

The case that I present here is typical; we have them by the hundreds in this section:

A woman, American, age 33, suffered for a long time from chronic malaria. The attack commenced with soreness through the liver, back, muscles of the back, and through the kidneys, radiating over the pubis and front of the abdomen, with extreme constipation, and when the stool was finally passed, it was of a light green color, almost as green as if Paris green had been mixed with water rather thick. The liver was enlarged, the spleen was enlarged, the skin was dry, rough and sallow, and liver spots were on the face.

She was ill quite a good while before I saw her first, and then was under my treatment for a good while before I thought that possibly thialion might do her good. And I was really astonished at the results. The first influence I noticed was that the green material stopped from the stools and they changed in character completely, and then she commenced to pick up, and the quinine took hold better, while the appetite improved.

The kidneys slushed out and the spleen began to be reduced, and she got better fast.

I was satisfied that if I had used the remedy at the start of her sickness, she would have gotten well much quicker. I had been giving 1 grain doses of calomel every two hours for four doses; then in four to six hours I gave castor oil, but the action of this was not at all to be compared with that of thialion. In fact, I think the latter will take the place of calomel, and I am now carrying on an interesting line of experiments in this direction.

In this case, I gave thialion in teaspoonful doses, a teaspoonful in hot water taken three times the first day, and after that once a day taken in the morning on rising for three weeks, when she was entirely well.

We have a great deal of malarial fever here, with constipation, pains in the liver, stomach and kidneys, and I am satisfied that thialion will clear the system of the malaria, because it helps out the quinine. We have more or less rheumatism and neuralgia with soreness of the body and limbs associated with it, which is probably due to the improper elimination of the uric acid.

Of course it takes more than one swallow to make summer, but cases are rapidly multiplying where thialion has wielded a powerful influence for good in this class of cases, and I only hope that future experience will bear this out.

HORLICK'S MALTED MILK.

FACTS IN EVIDENCE.

The fact that cow's milk has such general use by infants, growing children, and invalids, brings the question of wholesome milk to the attention of the thoughtful physician.

It is stated that since 1885 fifty-three epidemics of typhoid fever, twenty-six of scarlet fever, eleven of diphtheria, and one of Asiatic Cholera have been traced directly to the use of milk contaminated by disease-producing germs; and this has no reference to the thousands of sporadic cases of these diseases from the same causes.

The average cow is covered by dirt of all kinds, dried fecal materials, and loose hairs. The droppings of these, together with dust and bacteria from the hide of the animal is very great. When to this filth is added the pathogenic micro-organisms, tuberculosis and anthrax which come from diseased animals; and bacilli from typhoid fever, scarlet fever, and diphtheria, which get into the milk when it is exposed to polluted atmosphere or mixed with unwholesome water; and the poisons which develop by bacterial growth, to say nothing of the questionable agents called preservatives, added by vendors; one is led to question the advisability of prescribing commercial cow's milk at all. The ordinary methods of sterilization are carelessly followed by most people, and still with less care by those not responsible.

The above objections do not obtain with Horlick's Malted Milk. All cow's milk which enters into combination with malted barley and wheat in Horlick's Malted Milk has the closest scrutiny, careful examination and analysis. Only the richest and best that Wisconsin can supply—cream and all—is used. The product is thoroughly pasteurized, and is free from pathogenic germs. It is a food immediately ready for use, requiring no cooking, or the addition of any element to complete it.

Samples and literature mailed to any physician's address on application to GILMOUR BROS. & Co., 485 ST. PAUL ST., MONTREAL.

WEMALTA.

This is a scientifically prepared food for infants. It contains, according to the highest authorities, all the nutritious elements of a mother's milk when she is in a state of perfect health. The little infant takes it readily from a nursing bottle, and it can be fed to the child of a larger growth with a teaspoon.

Mothers who have a deficiency of milk, or who feel run down, will find a gruel made from WEMALTA FOOD assist nature wonderfully in up-building the system. It nourishes every part of the human body and gives that glow and feeling of satisfaction which always accompanies the best of health.

ANALYTICAL LABORATORY, Toronto, Jan. 28, 1897.

GENTLEMEN—I have examined the sample of Wemalta Food for Infants submitted by you, and have also studied its composition with reference to the intended purpose. From these considerations I have no hesitation in stating that I believe it capable of fulfilling perfectly all that can be expected of a farinaceous food of this character.

The greater part of the food is composed of carbohydrates in the form of amylose, dextrin, maltose and sucrose, which form the calorifiant material from which fat is built up and energy derived. To this is added a very considerable portion of vegetable fatty matter which tends to the same end. The nutritive principle is well represented by proteids, such as gluten, fibrin, with soluble albuminoids. The richness in these nitrogenous materials over the flours of various grains, indicates the presence of the inner cortical portion of wheat, together with the germinal part, the latter containing, relatively, a larger proportion of fat.

The ratio between the nutritive and heat-producing components is well-regulated, and approximates to that of human milk, which is as one to four. The reaction is such as to correct the results of acid fermentation.

The above materials constitute the essentials of a perfect food, but there is yet to be provided a digestive principle by which the amylaceous or starchy matter, may be converted into a form which can be assimilated by infants. It is well known that for the first three months the saliva of infants does not contain this principle in sufficient amount, and the enzyme of the pancreatic juice is also very deficient.

I see that you have supplied these wants by the admixture of a quantity of diastasic ferment, and have also partially converted the starch by exposure to heat. The food, if suspended in tepid water will almost digest itself, at least as far as starch is concerned.

Geo. W. Samuel, M.D., Nashville, Tenn., says: I had a case of a man who had been drinking heavily for several days. I prescribed Celerina in tablespoonful doses, every three hours, and in a short time he was in good shape again. I also used it in a case of neuralgia, in the following formula:

R Celerina..... 8 ounces.
 Quinia Sulp..... 60 grains.
 M. Sig. Teaspoonful every four hours.

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The prescribed dose produces a feeling of buoyancy
and removes depression and melancholy ; *hence the pre-
paration is of great value in the treatment of nervous and
mental affections.* From the fact, also, that it exerts a double
tonic influence, and induces a healthy flow of secretions,
its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr.
Hypophos. FELLOWS" As a further precaution it is
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WHOLESALE AGENTS

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It acted like a charm. In a case of impotency, I used calomel in connection with Celerina, and the patient reports everything standing all right.

Parke, Davis & Cos. Canadian Price List for 1900-1901 is to hand and, as usual, is a credit to this well known and enterprising firm. Many physicians have found this catalogue in the past to be a very useful and convenient reference book. We can testify to this issue being even more complete than any of its predecessors. We would call special attention to the notes on Bacteriological and Biological Products, pages 252 to 256, where a fund of useful information can be found in every concise form regarding these newer medicinal agents. We note with pleasure the growth in size of this firm's Canadian Laboratory at Walkerville, Ont., during the past year which was rendered necessary by their ever increasing output in Canada. If any physician has not received a copy of this catalogue it may be had for the asking.

PETROLEUM IN THE TREATMENT OF INFANTILE DIARRHOEA.

W. E. Fothergill in conducting his clinical researches (*Medical Chronicle*, Manchester, England, April, 1900), during the summer of 1899, administered petroleum in thirty-four cases of infantile diarrhoea. "The preparation was an emulsion containing $33\frac{1}{3}$ per cent. of petroleum and the doses varied from 5ss. thrice daily to 5l every four hours; the usual dose for a child a year old was 5l of the emulsion (M 20 of petroleum) thrice daily. In two cases salol was substituted at the end of a week. One child dies. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhoea was checked, and the stools soon regained their normal color and consistency. The emulsion seemed also to favor recovery from the accompanying bronchial catarrh. It is said that the whole quantity of petroleum ingested may be recovered from the faeces. Clinical observation shows, however, that petroleum has an influence on mucous membranes other than those of the alimentary canal. Its action in cases of bronchial and vesical catarrh can be explained only by supposing that after absorption from the intestines petroleum is excreted by various organs. These experiments seem to prove that infantile diarrhoea can be treated successfully without the use of opium or astringents."

Angier's Petroleum Emulsion has been prescribed by the medical profession of the United States as well as of England, for many years for just this class of troubles, and the foregoing results have often been verified in the hospitals of this country and by leading practitioners.

Angier's Petroleum Emulsion contains $33\frac{1}{3}$ per cent. of purified crude petroleum, 9 grains of the combined salts of lime and soda, with glycerine and emulsifying agents, and was probably the emulsion used by Dr. Fothergill. It is particularly adapted to the treatment of infantile troubles. It does not in any way disturb digestion or irritate the stomach, but on the contrary benefits them in every way, and children always like to take it. The emulsion may be prescribed to be taken in a little milk or water, which eliminates all taste of the medicine.

THE CANADA LANCET

VOL. XXXIV.

TORONTO, NOVEMBER, 1900.

No. 3.

ORIGINAL ARTICLES.

SOME REMARKS ON FORCEPS DELIVERY WITH SPECIAL REFERENCE TO OCCIPITO-POSTERIOR CASES.

By L. BENTLEY, M.B., TORONTO.

While examining the recent instruments for obstetric purposes a short time since, a suggestion came to my mind that some of the inventors of these instruments should also invent a convenient engine of two or three horse power to use them; for they seemed to me most formidable, and capable of exerting a force far beyond the muscular strength of an ordinary man. When I commenced obstetric work, I provided myself with a "Roberton" long forceps, and have found this quite sufficient for any delivery I have ever met and now think that they are quite powerful enough to deliver any fœtus that should be delivered with forceps. As for the "axis-traction" forceps, one would think that a short experience with forceps would be all that is necessary to instruct one of the correct axis in which to make traction, and also of the slightest tendency of an inclination of the fœtal head to rotate, which could then be slightly favored with the ordinary forceps, which would be inconvenient with the axis forceps.

In the application of forceps we are told to apply them in this way and that, different authorities having different methods; but to my mind they are mostly theoretical, and some are not at all times practical. In my experience the result has been satisfactory when the forceps were applied in any manner so long as they passed over the head easily and locked easily.

One author advises that we be sure the membranes have retracted or there will be danger of separating the placenta. In such a case the instrument will not go over the head properly. I once had an experience with such a case. After trying for an hour or more, in a fruitless attempt to apply the forceps, I made a careful examination and detected a small tuft of hair which had passed through a small opening in the membranes, which were tightly stretched over the head, the liquor amnii having escaped. I immediately tore open the membrane and had no further difficulty in applying the forceps. Again, we are so often told of the

danger of forceps slipping, particularly in occipito-posterior cases and in applying forceps at the pelvic brim. If the forceps are applied well over the head and traction made in the right direction they will not slip,—at least, they have never done so with me. Some years ago while delivering a patient I had this forcibly brought to my notice. The patient, a large, stout woman, had been in labour for several hours, with liquor amnii long drained away and the head still at the brim. I applied the forceps with the patient in the dorsal position in bed. The head was so far up that I had the nurse separate the labia so that I could lock the forceps within the vagina. The forceps slipped, and did so a number of times. I took time to think the matter out, when I saw that I was simply applying the forceps and pulling them off over the rounded occiput. I then had the patient laid across the bed, with her feet on two chairs and buttocks brought to the edge of the bed. I applied the forceps and made traction in the direction of the inlet, which I could not do while the patient was lying in bed in the usual position. Delivery was quickly effected, but with the child's scalp scratched in several places. I have never since had the forceps slip or cut a child's scalp.

Fortunately, there is not now so much prejudice against forceps as formerly. When properly used the danger is almost nil, and the benefits are great. There is beyond doubt less danger of harm with forceps in suitable cases than the continuous use of chloroform. I have for years made it a rule not to give chloroform, if possible to avoid it, until the os is in a condition that forceps could be applied. So, as soon as I conclude to give chloroform, I get the forceps ready, viz.: I make them aseptic; then plunge them into a jug of boiling water, and leave them there till wanted.

In counting back my last hundred cases, I find I have delivered thirty-five of them with forceps, and I would have delivered a number more except for the prejudice of the patients themselves. The danger from septic trouble from forceps must be very slight. I have had but two cases of septic trouble in my twenty year's practice, and in one of these I did not use forceps. The other case I had good reason to attribute to auto-infection.

Regarding occipito-posterior positions; Grandan and Jarman, in their work on Obstetric Surgery, page 85, say: "It is the general opinion among obstetricians that few abnormalities produce a more difficult condition to terminate successfully than those cases where the occiput has rotated posteriorly and is wedged in the hollow of the sacrum." T. Griswold Comstock, M. D., Ph. D., Master in Obstetrics, Vienna, in the "Medical Summary" for April, 1900, in speaking of occipito-posterior positions, says: "An accoucheur may have practised a score of years and never met with such a case; but when such an abnormal confinement falls to him, before his patient is safely delivered he will realize the tediousness and danger of the delivery." Also, in speaking of cases which fail to correct the position spontaneously, he says; "Then the practitioner has a serious problem, and before it has been solved by a safe delivery for both mother and child he will have gained an experience that he will never forget through his whole after life."

Regarding the early diagnosis of occipito-posterior positions I have but little to say. I have seldom made the diagnosis before rupture of the membranes. Afterwards, it seems useless to attempt to alter the position, except by the slight means we have to imitate the natural course of rotation of the occiput forward. This, to my mind, can be better done with the ordinary forceps than in any other method. One accustomed to the use of forceps will recognize the slightest effort of nature to rectify the position, which he can at least encourage. This he cannot safely do with the traction form of instrument. As rotation occurs after the head is well down in the pelvis, there can be no objection to applying the instruments in the superior strait. In applying the forceps, each blade should be allowed to fit itself to the head (which, in my experience, I have found to be at the sides of the pelvis) and over one or other brow and cheek and the opposite portion of the skull. If the blades are passed well over the head and they lock easily, and traction is made in the direction of the pelvic axis without undue efforts either to flexion or to extension, there will be no slipping. I have frequently removed the forceps after bringing the head well down on the perineum to give the occiput a chance to rotate, and found the head—except in one instance—recede instantly to the hollow of the sacrum, where it would remain until again brought down with the forceps. In this one instance rotation commenced before the forceps were removed, and was completed before it was possible to remove them; but they were unlocked and allowed to go as they would, and no harm was done.

The chief danger to the mother when delivery occurs is of course the danger of rupture of the perineum. To prevent laceration, one author says: "Flex the chin strongly on the sternum"; another says: "Extend the forehead." One goes so far as to recommend applying the forceps with the pelvic curve looking backward, so as to have more force for the purpose of flexion. To my mind, we are too apt to follow great leaders without consideration. No one knows better than the operator himself what ought to be done. He should have no time to think what this or that author says. He is himself the power, and it should be "what does he say?" With his head cool, common sense will teach him far more than any book. I once asked a dentist, whom I knew to be an expert in extracting teeth, if he had any particular method in extracting any particular tooth. He answered to the effect that he did not know how he was going to extract a tooth till he had on the forceps. He then let it come the way it seemed to come easiest. The same method is applicable in the case in question. If traction be made in the pelvic axis, the forehead will sometimes seem to tend to come first. If so, favor it. Or, mayhap, the occiput may seem to have a tendency to come first. If so, favor it. The method I use to prevent rupture is to first bring the head well down on the perineum, then grasp the forcep handles with the left hand, and with the right hand reach across the perineum with thumb on one side and the fingers on the other, and press with the whole strength of my hand towards the median line. The perineum should be wiped dry, as also should the hand. In doing this the strain is greatly relieved on the median line and transferred to the outer portion of the perineum.

Some authors now recommend the operation of "Episiotomy," namely: cutting on either side some distance from the median line, and stitching after. The above method will, I think, suffice without the cutting, and the principle is the same.

In five years I have delivered ten infants with face to the pubis, two of them primipara; successful in every case except the loss of one child, which I attributed to incompetency of the would-be nurse. The mother was a delicate primipara, and I had absolutely no help from the nurse. In a subsequent case with a trained nurse, we resuscitated the child in about half an hour. Previous to the five years mentioned I had a number of occipito-posterior cases, but as I have no full notes I do not mention them further than to say that I have never ruptured a perineum to any considerable extent. I have had a few superficial tears, which required one stitch; and I have put in as many as two stitches, never more. I attribute my success to: (1) Treating each case on its own merits; (2) relaxing the central portion of the perineum at the expense of the outer sides; (3) keeping perfectly cool and being in no hurry. As to the infants, most cases have required artificial respiration and other usual means to resuscitate them.

Since writing the above I have had another delivery with face to the pubis. In this case I had a chance to study carefully all the conditions. On the first examination I found the occiput, already in the hollow of the sacrum, pointing very slightly to the left sacroiliac synchondrosis. The forceps were applied at once, and the head brought down slowly to the perineum. The progress of the face was arrested when the anterior fontanelle reached the pubic arch; then the occiput showed a tendency to pass over the perineum. To favor this the handles of the forceps were gently carried forward until they pointed directly upwards (the woman in the dorsal position), when the occiput swept over the perineum with as much ease as is usual with the face in a like position. Under the conditions named, the occiput was delivered by flexion of the chin on the sternum; and having only the sub-occipito-bregmatic diameter to pass, namely—3.25 inches, while if the forehead had reached the pubes, the occipito-frontal diameter would have had to pass (if the occiput was delivered first) a diameter of 4.50 inches. Ordinarily, in my experience, the actual delivery has occurred so quickly that it would be difficult to say positively how delivery was accomplished. It seems to me that with caution all occipito-posterior cases might be delivered in the described manner and delivered easily. Prof. Comstock says he saw two cases, in consultation, where it was impossible to start the occiput from the hollow of the sacrum. In my cases they have all required a sharp pull, but when the head reaches the perineum there is but little force required. In the case just described, the occipito-frontal diameter of the foetal head was nearly six inches, which is abnormally long, and the sub-occipito-bregmatic diameter was three and one-half inches.

A CASE OF HYDATID DISEASE.

EDMUND G. H. WEIR, M.D., C.M.,
House Surgeon Toronto General Hospital.

William G—, æt 54, was admitted to the Toronto General Hospital on September, 29th, 1899, in a semi-comatose condition. He was a native of Canada, a clerk by trade, and of domestic habits. He had never travelled outside of Ontario, his life having been spent mainly in Toronto and the neighboring country towns. He presented the symptoms of chronic parenchymatous nephritis. He lingered until October 6th, when he died with marked indications of pulmonary oedema.

Autopsy by Dr. H. B. Anderson showed as follows:—Male; middle aged; nutrition fair; the usual post-mortem staining on the dependent parts; marked oedema of the hands, legs and feet; general pallor with marked yellowness of the skin.

Peritoneal cavity contained a large quantity of clear serous fluid.

Stomach. The mucous coat markedly injected, a good deal of pigmentation, submucous hemorrhages, especially at the cardiac end.

Duodenum presented distinct ulceration. One irregular ulcer $1\frac{1}{2}$ " in length and $\frac{1}{2}$ " in breadth extending along the long axis of the duodenum. Another irregular ulcer about $\frac{1}{2}$ " by $\frac{1}{4}$ " opposite the former. These were of a deep black color, having smooth and slightly raised margins, also two small dark erosions situated one inch lower down having smooth margins presenting very little thickening.

Left kidney. Somewhat enlarged, capsule non-adherent, surface smooth, cortex thickened and very pale, vessels injected, one small cyst at upper end of the kidney.

Right kidney. Considerable oedema within the capsule; otherwise the condition is similar to that in the left.

Liver. Weight three pounds. Upon the anterior surface of the middle of the right lobe is a very distinct nodule of irregular outline about 2" by $\frac{3}{4}$ " in size. This, on examination, proving to be a hydatid cyst. The cyst contained a clear fluid in which floated several small bladders like cysts. It was lined by a distinct white layer, smooth upon its inner surface. Beneath this was a light yellowish layer of gelatinous material. In one part was a secondary white layer beneath the one described. The outer wall of the large cyst consists of three distinct layers, the inner one covered with the smooth gelatinous material mentioned above, the middle layer smooth and adherent to the external coat which consists of condensed liver substance. The glands about the liver were not enlarged.

Lungs. Marked oedema was present in the dependent parts.

Oesophagus, perfectly free and in all respects normal.

Heart, slight exudation into pericardial cavity, no pericardial adhesions, heart muscle pale and brownish in color, slight atheroma of

aorta at its origin, valves normal, right side and aorta contained post-mortem clots.

Mesenteric glands, some apparently enlarged but little, others having attained the size of a bean and upon section showing small nodules.

Microscopic examination demonstrated clearly the characteristic structure of the cyst wall as described by Leuckart, and scolices and hooklets were found in large numbers in the fluid which presented all the characteristics, both chemical and physical, of hydatid fluid.

The extreme rarity of the affection in this part of Canada is sufficient apology for the publication of the notes of the case. Osler, after a thorough examination of the medical journals, transactions of societies, etc., and of the museums, was able, in 1882, to record only nine cases that had occurred in Canada. A careful perusal of the numbers of the *Index Medicus* warrants me in stating that no others have been published since that date. In an inspection of 800 bodies during his professorship at McGill College, only three instances were met with. Osler's cases are as follows:—

Case 1. Single cyst of liver; tramp; dissection subject in McGill College, 1877; died of pneumonia.

Case 2. Cysts in liver, spleen, stomach, omentum, mesentery and pelvis; Italian; resident of Montreal for four years; died after six months illness in 1880.

Case 3. Obsolete cyst in liver; Englishwoman æt 40; died of pneumonia.

Case 4. Cyst in liver; no history; specimen with those of 1, 2 and 3 in McGill College museum.

Case 5. Cyst in liver; Icelandic emigrant; patient of Dr. Buchan; female; cured by a single aspiration; scolices found in the fluid.

Case 6. Cysts in liver and pelvis; female; patient of Sheard and Fulton; of Toronto two cysts in liver, (one the size of a man's head) one of which had ruptured into the hepatic flexure of the colon so that daughter cysts were passed per rectum during life. A third was attached to the walls of the pelvis; death from septic infection from the intestine; specimen in the museum of Trinity Medical College, Toronto.

Case 7. Cyst of liver; young Englishwoman; patient of Cameron, Toronto.

Case 8. Obsolete cyst of liver; Englishman; inmate of Kingston Insane Asylum for 17 years.

Case 9. Suppurating cyst of liver bursting into lung; cyst in spleen; Englishman; æt 29; re-ident of Canada for five years.

In Manitoba, however, it is common among the Icelanders. Dr. Phillips of Toronto, during his term as Medical Health Officer of Winnipeg, met with as many as fifty cases of the disease, the notes of most of which have been published by Ferguson of Chicago.

The disease is wide spread; no part of the world is exempt. It is said to occur more frequently in Iceland than in any other part of the world. According to the report of Schleissner and Thorstensen it is the most frequent of all diseases of Iceland; out of 2,600 cases of illness

mentioned in the medical reports of the island 328, 12½ per cent. being affected with hydatids of the liver, and they estimate that 1-7th of the population of Iceland suffer from hydatid cyst. Krabbe, however, declares that these figures are too high and that only 2 or 2½ per cent. of the population can be proved to suffer from the disease, and Finsen, after 9 years' experience, states that out of 7,539 cases only 280 (3¾ per cent.) suffered from the disease.

In Australia the disease is also common, especially in the swampy district situated in the South Eastern part of South Australia and the contiguous western portion of Victoria. The returns, extending over a number of years, of the Mount Gambier Hospital, situate in this district, show 1 hydatid case for every 65 admitted for all complaints (Sterling and Verco in Allbutt's System).

In Europe the disease is not uncommon.

Strangely enough while in London hydatids are frequently found in Edinburgh the disease is exceedingly rare (Fagge). In Germany the disease is common, especially in the central and northern parts (Leuckart).

It also occurs, but probably with less frequency, in France, Italy, Austria, Russia and other European countries.

It occurs also in Egypt and Algeria.

In British India it is, according to the late Dr. Thomas, not of common occurrence, but, on the other hand, Hirsch claims that it happens somewhat frequently, and Cleghorn states that a certain proportion of the endemic hepatic abscesses of that country are referable to it.

In China it is extremely rare for out of 40,000 cases seen by Dr. Cantlie of Hong Kong, only one was of that nature and that was in a European.

Historical References. The disease was apparently not unknown to the ancients for reference is made, in the works of Hippocrates, Aretaeus, Galen and others, to large cysts in the liver containing water and in some instances, numerous vesicles. For instance, in Hippocrates is found this passage "when the liver is filled with water and bursts into the omentum in this case the belly is filled with water and the patient dies." And Aretaeus speaks of a form of dropsy in which "small and numerous bladders full of fluid are found floating in a copious fluid."

In the works of the physicians of the 16th and 17th century are found descriptions of the so-called hydatids, which give a correct and full statement of the external characters of the condition without, however, any recognition of their animal nature. By them the hydatid growths were supposed to be enlargements of the lymphatic vessels while the mode of origin was variously explained. In 1684 the animal nature of bladder worms seems to have suggested itself to Redi and shortly afterwards Hartmann and Tyson reached similar conclusions. In 1767 the parasitic nature of hydatid was first shown when Pallas recognized in them independent organisms allied to the bladder worm. This author having paid great attention to the constitution of the cysticercus had arrived at the conclusion that all bladder worms were forms of tapeworm, hence that hydatid was a form of tapeworm. He also observed the echinococcus heads, without however, recognizing their nature.

In 1782 the observations of Pallas were confirmed by Pastor Göze, who also indicated the existence of the germinal membrane lining the vesicles and determined that the scolices were the heads of embryonic taenia and possessed suckers and hook apparatus; and this was applied not only to the *ehinococcus* of cattle and also to that of man.

Subsequent observers and among them Laennec disputed the existence of the head in the human *ehinococcus*, though aware of its presence in hydatids of the lower animals and maintained that they were acephalocysts representing a special animal organism which stood in the lowest rank of animal life and in a certain sense filled up the gap between the inanimate serous cysts and the ordinary bladder worms.

In 1801 Rudolphi introduced the term *echinococcus* (literally hedgehog-berry), applying it to the scolices he having noted the hooklets in their interior.

In 1821 Bremser described the disease as it occurs in man, and proved the correctness of Gözes statement "that the *ehinococcus* of man had heads as well as the so-called *E. veterinorum*."

Bright was one of the earliest English physicians to observe them; he gave a drawing of them in the *Guy's Hospital Reports* for 1837.

In 1845 the first definite suggestion as to the nature of bladder worms was propounded, and even then the idea was not that they constituted a regular stage in the development of tapeworm, but rather that they were tapeworms that had "strayed" into a wrong animal and had consequently become dropsical and degenerated. Our exact and systematic knowledge of the subject may be said to date from the feeding experiments of Küchenmeister in 1851. He fed the *cysticercus pisiformis* of the rabbit to dogs and succeeded in rearing in their intestines the *Taenia serrata*; he also gave the *cysticercus fasciolaris* of the mouse and rat to cats and found that it became developed into the *taenia crassicollis*.

In the following year Von Siebold successfully reared the *T. echinococcus* in the intestine of a dog to which he had administered *ehinococcus* cysts of the domestic animals, proving that the hydatid is the larval stage of the *T. ehinococcus* which infests the alimentary tract of the dog.

This experiment was repeated by Kuchenmeister, Leuckart, Haubner and Nettleship.

Similar experiments with the human *echinococcus* by Kuchenmeister and Zenker failed, but Naunyn and Krabbe, and more recently Thomas of South Australia, have achieved successful results.

In 1853 the first experiments of the converse kind were performed by Kuchenmeister; proglottides of the *taenia coenurus* of the dog were given to lambs and sheep with the result that they became affected with "staggers" and bladder worms (*Coenuri*) were found in their brains.

Leuckart and Haubner, shortly afterwards, carried out similar experiments with the ova of *T. echinococcus* upon pigs with most eminently successful results, the livers being found studded with hydatid bladders in various stages of development. Up to this time the exact relationship of the *echinococcus* to the parent tapeworm and the manner in which it invades the human body had remained hypothetical.

In 1855 Virchow demonstrated the true nature of the so-called

multi locular Echinococcus, which up to this time had been regarded as an alveolar colloid cancer.

Others whose labors have aided much in the elucidation of the subject are Huxley, Cobbold, Livois, Wagener, Rasmussen, Davaine and Busk.

The credit of introducing the radical treatment belongs to Lindemann, who in 1871 performed the first operation of this kind.

THE BORDERLAND OF MENTAL DISEASE, FROM A PRACTITIONERS STANDPOINT.

Ernest Hall, Victoria, B.C.

It is not the purpose of the writer to enter upon the discussion of any abstract psychological problem, nor to attempt to introduce to the reader the various theories, with reference to the nature of mind, but to stimulate thought and interest in a phase of this subject, that can be divested of much of the obscurity that has heretofore prevented us from obtaining even a working knowledge of it. The limits of medical knowledge have not yet been reached, the vista is ever widening, the psychic must also be included in our study if we would know the whole man.

We are more than can be seen upon the dissecting table, and the student whose sight fails to penetrate beyond the corpus, remains in ignorance of the greater and more interesting fields for investigation. Our medical education has been too materialistic. Psychic phenomena have been considered a field for the specialist alone to deal with. The general practitioner too often ridicules the physical results of strong suggestion and decides the development of abnormal mentality as the limits of his jurisdiction, while the faith cure crank draws a crowd and gathers the shekels. Generally stated the quack fattens upon our omissions more than upon our errors. Extreme hydropathists compelled us to recognize in water greater therapeutic powers than heretofore our authorities had admitted. Electric cranks showed what marvellous results could be had by such measures as they practiced, while to-day Zionites and half a hundred other sects are forcing upon us the results of psychic forces that cannot longer be overlooked by the thoughtful investigator. The field is wide, and as we live let us learn and ever remember that the true physician must be alert to catch rays of information from all sources, and especially should he endeavor to lend a hand in bridging the apparently immeasurable gap that exists between the physical and the psychical.

Possibly the study of a few cases of borderland mentality may not be without interest. Cases whose mental grasp at times became so feeble as to practically lose control of the organism, and who would again rally only to realize that awful truth of failing mentality. What can be more dreadful to a sensitive nature than that Damoclean thought ever over, "I'm losing my mind." Yet this is no fancy picture, but too often a sad reality and one that has come near to many of those who are not far removed by natural ties.

With the system saturated with typhoid or pneumo-toxine, we are not surprised at the wanderings and delirium, but when pulse and temperature fail to indicate abnormal conditions should we without investigation give these cases into the care of the State hospitals? Our duty is to consider the advent of mental abnormality but the call to a more careful examination and deeper investigation in order that the organic flaw may be detected and if possible removed.

In order to direct attention in a more practical manner to the points under consideration, I give briefly the history of three successive cases who have recently come under my observation and treatment. The mental history of these cases agree in exhibiting characteristics that have marked the pre insane stage of by far the majority of the cases that I have seen. History and examinations show well marked local disease, the removal of which gave a corresponding gain in the mental condition.

The intensity of irritations from diseased areas, and the reflexes from arcs which have a diseased segment, and which are necessarily abnormal, are sufficient in themselves to disturb the sympathetic system, and cause nutritional changes, but when in its course the reflex arc includes the great basal ganglia, whose function is to originate the psychic reflex, that also will be abnormal and manifest itself in abnormal mentality.

As soon as the irritations are removed and the system given its natural play will the psychic also be readjusted, and the failure of the latter indicates our failure to detect and remove the physical disease. We must not forget to consider the force of habit, nor the influence of a strong will in inhibiting abnormal psychic reflex. As we can to a limited extent inhibit physical reflex, we may, to a certain extent, inhibit psychic reflex. A determined effort against the entrance of abnormal concepts may prevent the unbalancing of the mental equilibrium and the advent of dementia, but if the physical disease be severe and centrally located, the strongest case cannot but succumb to the intensity of irritation. In a given case the definition of the mental aberration will vary directly with the intensity of the irritation from diseased tissues and inversely as to degree that the individual has developed subjective or self-control. In other words of insanity is the psychic expression of the sum of the physical abnormality.

Now, in conclusion, what is our duty to our female patients who under the burden of life duties, too often in surroundings far from congenial, and oppressed by sorrow, harrassed by the customs of society, and irritated by disease, too often the unconscious victims of septic infection, whose reflexes refuse to submit to subjective guidance and become temporarily dominant? These reasonably look to us for relief. Are we to follow in the footsteps of those who would advocate stone walls and iron bars as therapeutic measures tending towards the recuperation of jaded nerves and exhausted vitality? In the name of humanity too long outraged by such thoughtless and cruel treatment, let us consider these unfortunates, but pleading more eloquently for our assistance.

Case 87.—Mrs.——, aged 27, two children, for fifteen years suffered from pain in the right side worse the week following menstruations. At

times pain was excruciating, worse than child birth. Received local treatment for periods covering several years, which would relieve her somewhat.

Mental symptoms.—For two years suffered from intermittent melancholia expressed himself as feeling blue, and being unable to overcome periods of despondency, objected to being left alone, and was very nervous.

Physical examination.—Heart, lungs, and digestive organs normal, no evidence of assymetry or degeneration. Local examinations should salpingitic adhesions and an enlarged, tender, and prolapsed ovary.

Right ovary cystic with adhesions removed with its tube, left ovary smaller.

Convalescence normal.—Mental condition normal.

Case 78.—Mrs. ———, aged 33—, three children, excellent heredity. For several years complained of pelvic inconveniences, and had been under physician's care almost continually during the last three years.

Mental condition.—Loss of memory and mental confusion, became unable to attend to domestic duties, would forget what work she should have done, and at times stop in the midst of a piece of work and be unable to complete it. Melancholia at times had a clear realization of her failing powers.

Physical examination.—No indication of disease other than that of the pelvis. Perineum slightly ruptured, retroversion and enlarged ovary.

Operation July 26th.—Right ovary cystic, was removed with its tube, left ovary adherent and cystic, was removed; resected varicocele of the utero-ovarian plexus necessitated the ligation of the veins in several places.

Convalescence normal.

Mental condition very much improved.

Case 79.—Mrs. ———, aged 38, no mental disease in family, mother of seven children. Suffered from pelvic trouble twelve years ago, had uterine polypus removed. Suffered from severe headache for five years. Was very excitable during menstruation. Received brutal treatment from a dissipated husband, and gave a fairly clear history of gonorrhoeal salpingitis. After husband's death she married again. Six months ago the patient began to be suspicious of her present husband, believed that he carried poison beneath his finger nails, which he proposed to administer to her. She began destroying furniture, was taken to Slitticum asylum, Washington, where she remained for six weeks. Four months after this she came under my observation, her husband was in the hospital and she was living in two rooms in the rear of a tenement home, ill and half starved. A pelvic examination showed retroversion with adhesions, with masses in the culdesac. Her mind was clouded, would answer questions slowly and with a great tendency to wander from the subject. Also declared she saw objects in her husband's hand.

Operation (Aug. 15).—Dense leathery adhesions. It was with great difficulty that the parts were enucleated. Large right pyosalpinx removed with left disorganized tube and part of left ovary.

Post operative history.—normal. While in the hospital she complained of a negress in the same ward, whom she said was influencing

her, also objected to a small mirror upon a table opposite, but her mind became decidedly clearer, and is steadily improving.

REMARKS.—None of these patients gave any history of hereditary taint. None gave indications of degeneration, stigmata, nor presented any physical abnormality other than pelvic disease. They all gave a definite history of suffering from local disease and all were improved physically by radical treatment. Concurrently with the restoration of physical vigor, the mental powers took on normal action, and two households have already been given the realization for which they had almost despaired in hoping. It is unnecessary for the writers to state the almost unavoidable conclusion that must exist in the mind of the unprejudiced reader as to the relationship of cause and effect as shown in these cases. The early history of many now considered hopelessly insane is not like the histories here given, and might not the application of similar treatment prove at least in a small proportion of cases beneficial? In view of the ever increasing number of these unfortunates who are clamoring at the gates of our state hospitals, is it not time that the profession at large begin to consider the problem of the treatment of borderland insanity.

SOME PHYSICAL AND MENTAL CONDITIONS IN THE DEGENERATE.

By DR. SAMUEL BELL, Detroit,

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Those of us who have given some study to the psychical as well as physical defects, have been profoundly impressed upon close inspection and study of the class of individuals found more especially in our asylums. It scarcely needs a trained observer to note the very decided anomaly of countenances as seen going through the wards. In the degenerative and neurotic types, the peculiar abnormal mental traits will usually be found associated with anomalies of bodily structure, known as stigmata. Physical and mental stigmata, either one or both conditions, do not conclusively in themselves, indicate mental disorder; but, when present and observed, do add additional proof and accumulative evidence in doubtful cases and are of clinical importance as regards diagnosis and prognosis, and assist in illuminating many cases coming under the notice of the general practitioner as well as the specialist. Some of the more important psychic stigmata of degeneration have been observed as follows: 1st. Precocity, or retarded evolution of intellect. 2nd. Extreme changeableness and irritability. 3rd. Exaggerated consciousness and a fanatical religious zeal or great moral depravity. 4th. Intense egotism with no regard for the feeling of others. 5th. Extravagant and cranky motives and desires. 6th. One-sided talents, disproportionate development of mental faculties, loss of inhibition of the higher forms of ideas, emotions and actions, with a general lack of the harmonious co-ordination of the intellectual, emotional and volitional elements of mind. Some of the chief physical abnormalities may be observed as follows: Cranial and facial deviation; recession

of lower jaw; very large or small mouth and thick lips; ears too large or too small, too long, short or wide, too high or low, too far back or in front, too close to the head or what is commonly known as lop-ears; anomalies of the buccal cavity; absence of second dentition; widely separated or mis-placed teeth; palate too short, flat, broad, high or narrow, or ridged in the middle, or dome shaped or cleft palate; abnormalities of the reproductive organs.

The above stigmata, occurring singly are of no special significance, but when a number of them occur in the same individual, while they may not afford positive proof, they certainly furnish accumulative evidence of a marked degenerative taint; especially is this the case when accompanied with psychic stigmata. It is difficult in the present state of scientific investigation to place the proper value upon information such as we possess along this line. Like many other of the novel, imperfect, scientific data, too great credulity has followed. They are undoubtedly of value in tracing individual origin from a degenerative source, but in order to furnish conclusive evidence, structural anomaly should have attained such a degree as to impair the normal function or part. It is a fact that individuals of active mind and great talents, often have stigmata with asymmetrical heads and faces; while, on the other hand imbeciles, idiots, criminals, lunatics and other neurotic individuals occasionally present a singular symmetry in structure of cranium; however, this latter class is not numerous enough to more than prove the exception to the rule. Dr. Clapham reports some unexpected conclusions from the measurements of several thousands of insane heads, which he found larger than among sane individuals of corresponding place in life and doing a certain amount of brain work. Including all classes of the insane, together with idiots, the average size of head was smaller than among the sane, and as regards the relation of diameters, the type was in general that of Broca's sub-brachycephalic chronic mania had the highest, and idiocy the lowest, average skull value, and epilepsy ranked next to chronic mania in regard to size. As to the shape of the head, the special insane type was considered that having the largest diameter in the anterior third of the circumferential outline, though the majority have the largest diameter in the middle third, just posterior to the median transverse line; females had more symmetrical heads than males, and imbeciles had the most symmetrical heads of all the classes of the insane. The majority had the left side of head larger than the right side and the right half of skull was generally pushed forward in advance of left half. Sepilli also reports a volumetric increase of the insane over the sane cranium, both in males and females. Lombroso in comparing the skull of the criminal woman with that of the normal, states that the former approximates more nearly that of the criminal male than that of the normal female, in the peculiarities of the lower jaw and bones of the occipital region. The data of criminal anthropology are not entirely applicable to all who commit crimes; they are to be confined to a certain number who may be called congenital, incorrigible and habitual criminals. But, apart from these, there is a class of occasional criminals, who do not exhibit, or who exhibit in slighter degrees, the anatomical, physiological and psychological charac-

teristics which constitute the type described by Lombroso as "the criminal man." Macdonald states in regard to the criminal brain that he does not find anything strictly peculiar to criminals. Its sutures are more or less incomplete and there are some other not very marked characteristics. The same author believes that the criminal is mentally inferior, this being due to arrest of development in childhood. Morel, Macdonald, Nordan, Maudsley, Kellogg and others who have made a psycho anthropological study of the degenerates do not attach so much importance to physical abnormalities as Lombroso, for instance. Physical signs degeneracy indicate nothing further than a tendency to psychical degeneration. It is scarcely a pardonable error, to consider every man with these characteristics as a predestined criminal, as some of the Italian school would do.

To the student of psychology this is an interesting subject. The line of differentiation between the criminal and the insane is very difficult and obscure. I recall two cases which came under my care while in charge of the U.P.H. for the Insane, which were degenerates. The first was a young man, physically well developed, with a fair amount of intelligence, but possessed with a low form of cunning which developed into homicidal acts. "His hand against every man and every man's hand against him." The second case was also that of a young man, arrested for indecent exposure. He had some of the characteristic physical stigmata. The low, heavy lower jaw, the small ear set further back in the head than normal, high palatal arch and sluggish intellect. In neither case were the mental characteristics so well defined that, strictly speaking, they could be placed in any of the regular classifications of insanity, yet neither one was safe to remain at large and will, in all probability, remain a continual expense to the taxpayers of the State. The former case was transferred to Ionia Asylum for Criminal Insane, where he remains in the same enigmatical condition to officials, there being no improvement. In both of these cases the psychical stigmata were more pronounced than the physical.

In the Hamberger case which has become celebrated in Detroit, exorcising the courts, lawyers and medical experts, the crime committed being one of the most revolting in the criminal history of Michigan, physical examination for the stigmatic degeneratonis was not very fruitful in results. The principal characteristics were the high palatal arch and inferior occipital development; these, with some not very prominent facial defects, were the only somatic stigmatic observed by the writer. This variety of mental defect occurs more frequently than has heretofore been observed. Investigations by scientists have stimulated thought and observation among the general profession, and even among the more enlightened laity. An individual commits some act which is in violation of the law, without delusion or incoherence, but the act may be an insane one and the physician is called upon to determine; and here medical experience comes into collision with legal tradition and popular prejudice. The common opinion is, that a person who is insane must give evidence of his disease by delusions, or raving, or great extravagance of conduct, and if there is no marked exhibition of the kind, he cannot be insane. While the lawyer can see and appreciate the symptoms which indicate

crime, he does not appreciate the symptoms which mark mental disease, and he is apt to think that the physician who does perceive them and recognize their serious meaning is simply manufacturing evidence of insanity, or that he is propounding theories in order to exhibit his own cleverness, or, perhaps, that he has been so biased by the nature of his studies that he will detect insanity wherever he earnestly looks for it. But as the eminent Maudsley has aptly stated, "Facts remain and assert themselves when ridicule has spent itself in scorn of medical theories." It is a fact that there do exist cases of insanity, in which the intellectual derangement is scarcely, if at all, apparent, and that some of the most dangerous forms of the disease are of this type; most dangerous, in that the insanity displays itself only in acts.

SELECTED ARTICLES

THE NATURE OF IMMUNITY.

Pre-eminent among recent discoveries are those relating to the nature of immunity. In no other province of medicine have the results of purely scientific investigations had such practical importance. Sero-diagnosis and sero-therapeutics mark the beginning of a new era, and a step towards perfection in preventive therapeutics. The discovery by Jenner of a method for rendering human beings immune to small-pox, the discovery by Pasteur some 80 years later of a method of producing artificial immunity in animals, are the foundation stones of the edifice which has been erected within the brief period of one decade by the indefatigable labours of a host of investigators, and which Ehrlich has crowned by formulating a general principle applying to the whole. Our present conceptions of immunity may be said to have been initiated by the demonstration by Behring, Pfeiffer, and others, of the formation in the living body in the presence of toxins or of bacteria, of certain substances—“*Anti-körper*”—which exert a specific antagonistic action against the particular toxin or bacterium which gave rise to their development. The presence of these antagonistic substances in the sera of human beings suffering from infective diseases, and in the sera of highly immunised animals, is recognizable only by the properties—anti-toxic, anti-bacterial, lysogenic, agglutinative, etc.—which they confer. Their formation is the result of a reactive process, and they are apparently without exception definitely specific: thus the serum of an animal which has been treated with repeated injections of some toxin becomes anti-toxic in that it contains a substance antagonistic to that particular toxin and to no other; similarly with bacteria the anti-bacterial substances formed, lysogenic or agglutinative, are antagonistic only to the particular bacterium employed. It might thus appear that each toxin and each bacterium was a problem in itself, but this does not preclude the possibility of one fundamental process underlying the formation of all such antagonistic substances.

In considering the genesis of these substances take first the anti-toxins. There is little doubt that anti-toxin acts chemically, rendering the toxin innocuous by forming with it a loose chemical compound; the reaction, however, is not a true chemical combination since the substances apparently do not unite in definite proportions. According to Ehrlich a molecule of toxin is composed of two distinct atom groups, the one unsatisfied—the haptophore group—is constant, stable and capable of combining in constant proportions with anti-toxin, the other—the toxophore group—is unstable and readily deteriorates, and on it the injurious effect of the toxin depends. Now the haptophore group, although harmless in itself, appears to be a very essential constituent of the toxin molecule.

By its combining powers it can bring the toxin into intimate relation with the cell protoplasm and so allow the toxophore group to exert its damaging effect. It acts the part of an anchor, fixing the toxin to the tissue cells. If this anchor is destroyed, if the unsatisfied atom group is satisfied and its combining powers are abolished, the toxin is harmless. In this way anti-toxin renders toxin inert, the combined toxin and anti-toxin circulating harmlessly in the tissue fluids.

As regards the formation of anti-toxin. Ehrlich's hypothesis is based upon his conceptions of the mode of action of toxins and of the molecular structure of the cell protoplasm. He considers that the living protoplasmic molecule consists of two distinct parts, a central atom group (*Leistungskern*) comparable to the benzene ring, and certain lateral atom groups or side chains (*Seitenketten*) which, having unsatisfied affinities, can fix other unsatisfied atom groups, and so bring them into relation with the central group which conducts the work proper of the cell protoplasm. By means of such side chains the protoplasmic molecule is able to fix atom groups derived from foodstuffs, and so ensure its own continued existence. In a similar way toxins are brought into intimate relation with the cell protoplasm, the haptophore groups uniting with such of the side chains as have corresponding affinities. Side chains satisfied by combining with toxins are obviously useless as far as the cell economy is concerned, and so it follows that when as a result of repeated doses of toxin more and more side chains become satisfied, new ones are regenerated, and those serving to fix the toxin molecules are cast off and circulate free in the tissue fluids. This regeneration of side chains, however, in accordance with what Weigert considers to be a general law, takes place in excess of those cast off combined with toxin, and in consequence more are formed than satisfy the requirements of the protoplasmic molecule, many of these are also cast off and circulate free in the tissue fluids. They still have the same affinity for toxin and thus constitute anti-toxin. Anti-toxin is therefore the side chains of the cell protoplasm regenerated in excess and, therefore, set free. As Behring puts it, "the same substance, which when situated in the cell is the necessary condition of poisoning, becomes the basis of cure when it passes into the blood." A difficulty in explaining the origin of anti-toxins is their number and variety, each toxin having its corresponding anti-toxin. But if, as Ehrlich contends, the action of a toxin depends upon its affinity for certain atoms of the protoplasmic molecule, there must be as many varieties of atom groups as there are toxins, and therefore the complicated constitution of the protoplasmic molecule must afford the basis for the formation of a corresponding number of anti-toxins.

Passing to the question of anti-bacterial substances, the problem becomes somewhat more complex. It has been shown by various observers that the serum of an animal immunised by successive injections of some bacterium, *e.g.*, that of typhoid or cholera, contains substances which in some cases produce disintegration (lysogenesis) of the particular bacterium either *in vitro* or *in vivo*, or else cause the bacteria to run together into clumps (agglutination). Analogous phenomena have been observed in the case of red blood corpuscles and other cells. Thus the

serum of an animal which normally possesses neither hæmolytic nor agglutinative powers may, by repeated injections of the blood of some other animal, acquire those powers over that particular blood. In such cases the action of the serum depends, not on the presence of a single substance corresponding to antitoxin, but on two. If such a serum be heated to 58° C., it loses its specific disintegrating powers, but immediately regains them on the addition of a small quantity of serum from a normal animal; if, however, such normal serum be previously heated to 58° C., it has no effect whatever. It would thus appear that the process of lysogenesis depends upon the presence in normal serum of some enzyme-like substance destroyed at 58° C., together with another substance specially developed in the process of immunisation, and analogous to the anti-toxins, which has been termed by Ehrlich the immune body. It has further been shown, in the case of hæmolytic serum, that the immune body combines with the red blood corpuscles. A hæmolytic serum was heated to 58° C., and then allowed to act on red blood corpuscles for some time at a suitable temperature. On centrifugalising the mixture it was found that the immune body was no longer in the serum, but in the red corpuscles. In the case of agglutination this power is retained by the serum when heated to 58° C., and it has been suggested that the agglutinin and the immune body of Ehrlich are the same substance. If we now compare the effects of repeated injections of toxin and bacteria, we have in each case the formation in excess of a substance which is specific, in that it has special combining affinities for the substance (toxin or bacterial protoplasm) used in the injections. Its mode of action, however, is different in the two cases: whilst anti-toxins effect their curative powers by combining directly with the toxins, the anti-bacterial substances or immune bodies act through a ferment-like substance present in normal serum, which, by their combining powers, they are able to fix. At present the problem of the anti-bacterial substances is only incompletely worked out, but the results obtained with hæmolytic sera leave little doubt that corresponding facts will be established with regard to bacteriolysis, and that the whole phenomenon of lysogenesis will be found to be a general law.

Such briefly are the outlines of Ehrlich's side-chain theory of immunity. Although many points still require confirmation and further investigation, it is none the less a most valuable working hypothesis. It affords at once an explanation of the difference between active and passive immunity, *i.e.*, between the immunity produced by repeated injections, either of toxin or bacterium, and that produced by the injection of serum containing anti-bodies already formed. The former, depending upon the acquirement of the habit of excessive side-chain formation, and being a regenerative power, in accordance with a well-recognized biological law, is naturally of much greater duration than the latter, in which the quantity of anti-bodies injected is definite, and in which regeneration takes no part whatever. Further, as already indicated, it offers a feasible explanation of the formation of a variety of anti-bodies possessing specific relationship to the corresponding substances injected.—*Medical and Surgical Review of Reviews.*

SUPERHEATED DRY AIR IN THE TREATMENT OF RHEUMATIC AND ALLIED AFFECTIONS.

By THOMAS E. SATTERTHWAITE, M.D.
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Hot-air baths have been in use from a very early period, but during the past ten years great advances have been made both in their efficiency and sphere of usefulness.

For example, in the Turkish bath, which is the old Roman hot-air bath modernized, the air of the hot room that the patient breathes is laden with the vapor of his own perspiration. With a view to overcoming this objectionable feature various schemes have been resorted to. One of the most familiar and popular is the hot-air box or cabinet, an appliance that has been and is now extensively used under various designs. The patient, as is well known, sits on a support in a rectangular box, which is then closed about him, so that only his head and neck project, or perhaps there is an additional opening for the hand, so that he can wipe off the perspiration from his face. The air in the box is heated by the alcohol lamp or some other artificial means. Copious perspiration is usually superinduced.

But while the hot box obviates the disadvantages of breathing hot vapor, the temperature of the air in the box cannot be raised to a very high point for fear that the skin will be blistered. In fact, the limit of safety is put at about 150 degrees F. In the Turkish bath the limit is 170 degrees F., and for the reason just given.

This disadvantage is overcome by the new dry-air machines, such as the Sprague and Betz, Tellerman and perhaps others, in which the air is readily heated to 250 degrees F. and upwards so as to be borne safely by the patient. It is not a question of how much heat these machines can generate. There is no difficulty in heating the air to 400, 500 or 600 degrees F., but there is a limit to the tolerance of the heat by the skin, depending somewhat on the extent of bodily surface exposed. As a rule the heat employed varies from 250 degrees F. to 350 degrees F., according as the whole of the body or only a part is heated. But a temperature of 400 degrees F. is about the limit that should be considered desirable in any case.

The central idea in all the newer machines is to superheat the air, and at the same time keep the exposed surface of the body dry, and the method employed is practically the same in all the machines. Each of them embraces the notion of a metal chamber, varying in size and shape, but in general cylindrical, or semi cylindrical, the concave portion of the cylinder being turned towards the part to be heated, while air-tight sleeves or curtains attached to the edges of the cylinder are drawn snugly about the part to be heated, so that the superheated air is able to pass freely over and around it. And yet the hot air is not permitted to

impinge directly on the part, because the steam from the perspiring skin would scald the skin. This is prevented by the interposition of some absorbant material which soaks up the perspiration as fast as it forms. Turkish toweling is the material usually used, and as a further protection from the hot metal the chamber is lined with asbestos or other non-conducting material.

It is not clear when this new method was first introduced, but the Tellerman machine was certainly put in operation in London on May 30th, 1893. Since then it has been used extensively in English and French hospitals, and somewhat in the United States and Canada. It was shown in this city at a meeting of the Practitioners' Society, on December 4th, 1896, by V. P. Gibney. Some of the published results of treatment, as they have come to us, are briefly as follows:

Sibley, of the Northwest Hospital in London, has reported (*Lancet*, August 29th, 1896) success by the method in acute and chronic gout. Déjerine, of the Salpêtrière, and Chrétien, assistant at Dalmont's Clinic, in Paris, have confirmed these statements (*La Presse Médicale*, December 26th, 1896).

Landouzy, of Paris, also has authorized the statement that he found the hot dry-air treatment produced better results in acute gout, chronic rheumatism and sciatica, than the old external remedies alone, or in conjunction with drugs (Tellerman Treatment, p. 145).

Finally, in a paper read before the British Medical Association in Montreal, September 1st, 1897, James Stewart reported that after considerable experience in cases classed as rheumatoid arthritis, he found superheated dry air the best means of treating them, and that it could be safely applied in cases of weak heart, valvular and renal diseases.

In our own country Dr. George L. Kessler, of Brooklyn, who has practiced this treatment very extensively, and is therefore well qualified to judge, has noted the following effects:

1. A contraction and then a dilation of the superficial blood vessels.
2. The pulse increases in strength and in rapidity of from ten to twenty-five beats per minute.
3. The bodily temperature rises from one to six degrees Fahrenheit. There is a profuse acid perspiration. Almost immediate relief from pain. General sense of comfort. Stimulation of nerves and lymphatics. Increase in respiratory movements from two to six per minute; but nervousness and twitching if the patient is exposed too long to the heat. After a number of treatments he has found, as secondary results, increased excretion of uric acid, softening and absorption of uratic and other deposits, reduction and sometimes relief of albuminuria in kidney and cardiac diseases; some loss of weight; improvement in some chronic skin diseases; temporary soreness and nervousness in gouty and rheumatic patients during absorption of the deposits; debility if the baths were not prolonged.

I have had little personal experience in the use of superheated dry air, but my colleague, Dr. Barclay, has used it in thirty-two cases in conjunction with massage and passive motion, and has furnished me with the following table from his practice showing this result:

Acute rheumatism.	2	Cures, 2	
Subacute "	1	.....	Improved, 1
Chronic "	6	Cures, 3	Improved, 3
Gonorrhœal "	1	.....	Improved, 1
Muscular "	9	Cures, 8	Improved, 1
Rheumatism in old fracture.	2	Cures, 1	Improved, 1
Rheumatic spondylitis	2	.....	Improved, 2
Acute gout	1	Cures, 1	
Sprains	3	Cures, 2	Improved, 1
Inflammation after wounds.	1	.. .	Improved, 1
Old fract of patella	1	.....	Improved, 1
Sciatica	1	.....	Improved, 1
Inflammation after dislocation of shoulder.....	1	Cure, 1	
Occupation neurosis (Sto-ker's cramp)	1	Cure, 1	
<hr/>		<hr/>	<hr/>
Cases, 32		Cures, 19	Improved, 13

It will be noticed that of the twenty-four cases of gout and rheumatism there were fifteen cures, but that in all some benefit was noticed. I am disposed to think, and Dr. Barclay joins me in it, that the next series of cases treated will show still better results; for, as this method becomes better known, patients will give it a more earnest and thorough trial.

In applying heat locally, as in treating the cases just mentioned, a temperature of 350 to 360 degrees F. is well borne. In my own case I found that hot air at a temperature of 360 degrees F. was not unpleasant when applied to the elbow joint, and that it could be borne without discomfort for fifty minutes. Of course, when the temperature reaches these high points, care must be taken to avoid scalding the skin, but with reasonable care there should really be no danger. When the body machine is used it is not practicable to generate so high a degree of heat, and I fancy 280 or 290 degrees F. is about the limit. In this machine the temperature of the body will rise from two to four degrees as a rule; on the other hand, when heat is applied locally the bodily temperature will rarely rise more than two degrees. The pulse may or may not become more frequent, but it is not uncommon to have it rise twenty to thirty points, especially in women or at the first application. The respiratory movements are usually increased in frequency. In the body machine there is copious sweating from the entire surface of the body.

My personal experience may be interesting. I entered the body machine at 4.10 one afternoon, two physicians being in attendance. My temperature, 98 degrees F.; my pulse 100. The air in the chamber registered 160 degrees F. At 4.45 the thermometer registered 276 degrees F. My bodily temperature, 100½ degrees. Fifty minutes later my bodily temperature had fallen to 98½ degrees. I was in the bath thirty-five minutes. Pulse on leaving the bath was 110. Perspiration was copious from the entire surface of the body. There was at no time any sense of positive discomfort, but the cool drinks given at intervals, and the appli-

cation of cool water, and, later, of ice to the forehead, were decidedly agreeable. General massage and passive movements followed. I resumed my usual work in one hour and forty-five minutes after beginning the treatment, feeling no unpleasant reaction during the remainder of the day, but rather a sense of exhilaration which lasted until bedtime, and, in fact, I thought, well into the next day. The high rate of my pulse before entering the machine was perhaps owing to my haste in preparation for it as my time was limited ; my normal pulse is 74.

And now for a description of the machines. In the Sprague system there is one for the body, one for the leg and arm, and a local. The construction of the Sprague machines varies, but in principal they are practically the same. Each consists of three metal cylinders, separated by spaces of varying width. The cylinders are open at each end. The outer cylinder is of copper, lined with asbestos, to prevent heat radiation; the middle cylinder is of steel, and hollow ; the inner cylinder is of brass, with holes to allow the air heated by the hot steel to be showered over the patient. The second space is connected with three tubes within the smokestack to allow the superheated air to escape. At the lower part of the cylinders are numerous tubes between the gas jets to suck up the fresh air and replace the moist hot air escaping through the stacks. In this way there is constant circulation. The heat is supplied by Bunsen burners, the flames of which impinge against a plate half an inch below the lower part of the steel cylinder, so heating it. The edges of the steel cylinders and the two intervening spaces are covered with wood backed with asbestos, and on these rims of wood are hooks to which cotton drilling is fastened to close the ends of the apparatus, and include as much of the body as may be desired. The brass cylinder which lines the inner chamber is covered by ribs of cork. The patient lies upon a mat of fibrous magnesia, superimposed upon a layer of asbestos. At either end of the cylinder, and level with the bottom, are extensions for the head and lower extremities. All the cylinders are mounted on metal legs. All parts of the machine that the patient could touch are made of poor heat conductors, namely, wood, cork, fibrous magnesia or cotton drilling, while the asbestos accumulates and distributes the heat. In the treatment chamber are inserted high temperature thermometers, which do not, of course, come in contact with the metal.

The Betz machine in common use consists of a metal cylinder lined with asbestos, opened at one end only. The open end is fitted with a cloth attachment to encircle the part that is to be treated ; the air is heated by gas, gasoline or alcohol. A high temperature thermometer is fitted into it so as to indicate the heat of the treatment chamber. The part to be treated is wrapped in four to six thicknesses of blanket, or, better, Turkish towelling, so as to absorb the moisture the instant it exudes from the surface of the skin. This moisture is turned into vapor by the hot air, and fills the cylinder. To prevent saturation of this air it is allowed to escape at intervals through a stop-cock. At the same time fresh air is allowed to enter from below. The stop-cock is removed about every ten minutes during the treatment. If the air at any time becomes saturated, the patient will immediately feel a sudden access of

heat, and then the vapor may be let out; or slight pressure on the towelling at the point of pain will relieve it, and the treatment may proceed without further interruption. It is an important point to wrap the part evenly with the absorbent towelling or blanket, otherwise perspiration lodging between skin and the absorbent towelling may get superheated and cause a blister. In the local Betz apparatus the temperature is held at about 350 degrees Fahrenheit for one hour*. The advantage of the Betz apparatuses is that they are comparatively light, and are portable, so that they can be used at the bedside of the patient.

In the earlier reports, such as those I have noted, little has been said of the use of drugs in association with the hot-air treatment, but I am persuaded that those best qualified to judge† do not think it well to exclude internal medication. In fact, inasmuch as this method improves the circulation, gives better tone to the excretory organs, and stimulates the lymphatics, it is apparent that the physical action of appropriate drugs will be greatly promoted; and for the same reason I believe that the deposits in gout and rheumatism will be favorably influenced. That they can be actually absorbed in some cases I also believe.

The idea is prevalent in some quarters that hot dry air is depressing and should not be applied in cases of chronic heart disease, arterial sclerosis, neurasthenia, and anæmia. As a matter of fact, however, it appears from recorded experiences that patients with cardiac or arterial diseases *may* not be injured if the treatment is carefully applied; that is, if it is begun with slowly rising temperature, or with a single limb, then two limbs, and finally the body. Of course, if untoward symptoms occur in a case associated with chronic heart disease, the treatment will necessarily be suspended. But I have heard of no mishaps, which indicate that this treatment is contra-indicated. Of course, it is presupposed that this treatment is always to be under the direction and supervision of a physician.

It is apart from the purpose of this paper to enter into a discussion of rheumatism and allied diseases. But I have felt that it is important that the attention of the profession be called to the subject of superheated dry air as a therapeutic agent, believing that it has a wide field of usefulness, more especially in chronic, articular, and muscular rheumatism, where we all know internal medication alone is apt to give unsatisfactory results.

* The Betz Co. also manufactures body machines.

† See Skinner, *New York Medical Journal*, October 8, 1899.

LEUCORRHEA: ITS CAUSES AND TREATMENT.

By JOHN COOKE HIRST, M.D.,
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There is perhaps no single condition so distressing to the patient or so exasperating to her medical attendant as leucorrhœa. Except in a few instances, such as specific and septic infections, leucorrhœa is almost always secondary.

Speaking broadly, the discharge can have its origin in one of three places: (1) the vagina, (2) the cervix, and (3) the endometrium of the body of the uterus.

The discharges vary greatly in character, depending upon their point of origin.

Vaginal leucorrhœa is, always excepting gonorrheal discharge, thin and serous, rarely thick, and still more rarely streaked with blood.

Cervical leucorrhœa is extremely thick, very abundant and rarely streaked with blood.

Corporeal leucorrhœa is thinner, often offensive and excoriating in character, and quite commonly streaked with blood. I have seen patients whose thighs have been excoriated on the inner surface for a distance of four to six inches on either side, as a result of such a discharge.

Leucorrhœa is very common in women whose general health and vitality have been lowered for any reason. It would seem that almost any local or general condition slightly out of the normal sets up a leucorrhœa. It would be useless to attempt to give a list of the causes, but as an instance of an unusual etiology I may mention that I have seen a stubborn leucorrhœa in a girl of twenty-four, which was traced both by her medical attendant and myself to ungratified sexual excitement.

When a patient presents herself complaining of leucorrhœa, the first thing to do is to determine the cause, if possible. Any local treatment would be worse than useless, unless the source of the trouble be removed at the same time.

Vaginal leucorrhœa it has been my custom to treat by the use of tonics for the general health, astringent douches of alum and zinc sulphate, and the occasional use of a solution of silver nitrate, gr. x-xx to f $\frac{3}{4}$ j. I apply this latter by inserting a cylindrical speculum, filling it full of the solution, and then slowly withdrawing the instrument, thus making sure that the solution reaches every part of the vaginal wall. This is more satisfactory than the use of a swab. This treatment, combined with douches of corrosive sublimate, 1:4000, is the one I use in gonorrhea, and it has given me perfect results.

Cervical leucorrhœa, always excluding a gonorrheal infection, is usually due to a catarrhal inflammation of the cervical endometrium, usually secondary to some other condition. The discharge here is very thick and copious, necessitating the wearing of a napkin. It is often

accompanied by erosion of the cervix. This erosion, when not due to laceration, is produced by swelling and prolapse of the cervical endometrium, and then desquamation of the squamous epithelium underneath the prolapsed mucous membrane. It has been my experience that when such an endometritis exists it usually involves the coporeal endometrium as well, so that we can often cure the condition entirely, or at least form a much better foundation for satisfactory after-treatment, by a thorough curettement. My non-operative treatment consists in *hot* astringent douches, painting the vaginal vault with Churchill's tincture of iodine, and the use of boroglyceride tampons three times a week, the whole combined with a general tonic treatment. I always prescribe tonics for these patients on general principles. They are generally indicated, and can at the worst do no harm. The only precaution taken is not to prescribe iron in cases where there is a tendency to uterine hemorrhage.

When this treatment has not the desired effect I begin using pro-targol bougies by the method I shall presently describe.

Leucorrhea from the uterine body is nearly always associated with an endometritis. It is a peculiarity of the uterine mucosa that when it becomes inflamed it hypertrophies so that from a normal thickness of one millimeter we may get endometrium of four or five times that thickness. Acute endometritis in this locality is nearly always septic from a labor or miscarriage. The treatment should be curettement to remove the hypertrophied masses; then tonic treatment with intra-uterine medication of one of the new silver salts in the form of bougies.—*Therapeutic Gazette*.

RECENT VIEWS ON THE EFFECTS OF ALCOHOL.

The conclusion reached by Professor Atwater, says the *Medical Record*, as a result of experiments conducted by him last year to determine the effects of alcohol on the human system, that the substance taken in small quantities and under certain conditions is a food, has given rise to much and bitter discussion. The garbled accounts given in the newspapers of Dr. Atwater's findings are chiefly responsible for this state of affairs. Many of these journals proclaimed that the professor had proved alcohol as a beverage to be harmless, whereas, in fact, he went no further than to declare that it is oxidized in the same manner as any other food materials, and is transformed into heat and muscular energy. The experiments were not sufficiently prolonged to demonstrate what the effects might be upon the human organism of the habitual use of alcohol, nor was any attempt made to show that such use would be anything but harmful.

Another pronouncement on the same question has been recently made by the well-known Viennese clinician, Prof. Max Kassowitz, who asserts that the dogma concerning the nourishing and strengthening character of alcohol is one of the fatal errors of science. He holds the view that the majority of physicians take up an inconsistent position with regard to the use of alcohol, for the reason that, while they are well aware of its dangerous and poisonous qualities, they nevertheless contribute to making permanent the false ideas concerning the value and effects of

alcohol which are so generally disseminated. Kassowitz explains these inconsistencies on the ground that the teaching which considers alcohol a food because it is burned in the organism, has held its ground in spite of many disregarded newer investigations which have shown its indefensibility. He is therefore of the opinion that the assumption ascribing food properties to alcohol based on simple theoretical consideration is a grave scientific error, the removal of which is the most important preliminary condition to an effectual battle against alcoholism.

Dr. Hermann Blocher, of Basle, Switzerland, in an article in the *Internationale Monatsschrift für die Bekämpfung der Trinksitten* for April, comments very favorably upon Professor Kassowitz's utterances, and discusses the matter from the standpoint of physiological experiment. He refers to the investigations of Miura, which indicate that alcohol belongs to the same group of substances as glycerin, lactic acid, butyric acid, and so forth, which are indeed burned in the animal body, but which nevertheless are not fit, even to the smallest extent, to take the place of necessary food in the preservation of the body. Miura found that the addition of alcohol to the food before its being taken not only causes no diminuation of the nitrogen output, and does not prevent the loss of body material (as is the case with the addition of sugar or fat), but that, on the contrary, the nitrogen output following this addition of alcohol may become yet greater than it had been without this addition.

Professor Atwater did not pretend in his experiments to prove the innocuousness of alcohol as a beverage, and it was due to the newspapers that such a belief was disseminated. Whether alcohol in small amounts and used with discretion is harmful has yet to be clearly proved.—*The Dietetic and Hygienic Gazette*.

THE ROLE OF THE LIVER IN THE PRODUCTION OF ECLAMPSIA.*

By W. A. NEWMAN DORLAND, A.M., M.D.,
Philadelphia, Pa.

My object in presenting this short paper is to bring more prominently to your attention one of the recent suggestions in obstetrics and to elicit the views of the members of the Section on the subject. There has developed during the past few months a strong reaction against the old-established theory of attributing all cases of puerperal eclampsia to a renal inadequacy pure and uncomplicated, as manifested by an albuminuria of varying degrees of intensity. The tendency to-day is rather to ascribe the convulsive seizures and the albuminuria to one and the same cause—namely, the presence in the blood of a certain toxin, or it may be certain toxins, of unknown constitution and undetermined origin. The great constancy of hepatic lesions, necrotic and hemorrhagic, that have been noted in autopsies upon eclamptic women, and the accompanying urinary

* Read before the Section on Gynecology, College of Physicians of Philadelphia, May 17, 1900.

changes indicative of imperfect katabolism, have inclined the consensus of opinion toward the view of auto-intoxication in eclampsia, with the greatest interest centring in the liver as the probable laboratory whence the poison or poisons are engendered. The direct proof of this doctrine is still wanting, but numerous arguments in its favor are furnished by the clinic and by pathologic anatomy and experimental medicine. As Bouffe de Saint-Blaise has indicated, the bodily organism is, in a general way, constantly prone to these forms of auto-intoxication. All food contains toxic material, and in addition to these foreign poisons there are those that originate in the economy, as the bile and other poisonous organic liquids which tend to the production of a toxicosis. Against this danger the organism must constantly fight. It has, in fact, two sets of organs for its defence—namely, the metabolic organs, those whose function it is to arrest and transform the toxic principles, (intestines, spleen, lymphatic glands, suprarenal capsules, thyroid glands, and liver), and the eliminating organs (the intestines, skin, lungs, and kidneys). The liver, therefore, it will be noted is called upon to assume a triple rôle: to collect certain toxic principles in order to turn them gradually into the blood or to excrete them with the bile; to transform other foreign poisons in a similar manner; and through the antiseptic properties of the bile, to moderate the intensity of intestinal fermentation.

Naturally a lessened toxicity of the urine must mean an increased toxicity of the blood. Given a free escape of the nitrogenous elements in the urine, and the liability to eclampsia diminishes in direct proportion. The percentage of urea is an index of the amount of waste successfully excreted, and if this percentage is high there is probably not a great accumulation of poisons in the blood. It becomes evident, then, that it is not so much the amount of albumin that is present in the urine of a given patient that will act as the index to her liability to eclampsia, as the daily quantity of urine excreted and the relative proportion of solids contained in this total amount. The fulgurant cases of eclampsia usually show not even a trace of albumin, but a diminished excretion of the urinary solids.—*Amer. Gyn. & Obs. Journal.*

(161) ARTIFICIAL FOODS.

Professor A. Jacobi (New York), read a communication on this subject in the Section of Therapeutics at the recent International Congress of Medicine. He said: The results of the analyses of human milk are contradictory; no two are alike. Alterations in different periods of lactation which are asserted by some are denied by others; those caused by menstruation, sickness or ingesta are either well understood or dimly appreciated but rarely measurable. The nature of its proteid, whether uniform or compound, is not sufficiently known. Whether there is an essential quality that is beyond the domain of chemistry is not known. That is why so many and so different iron-lad rules have been established for the selection of substitutes, and why the uncertainty has rendered experimentation with commercial substitutes, by chemists and

even by respectable clinicians, so common. If human milk were a uniform body, the demand for an exactly equivalent substitute would be justified. Nature, however, is more liberal in allowing latitude than a chemist. Heat both improves and injures milk. When milk is exposed to 68° to 70°C., ten or fifteen minutes' heat destroys the bacterium coli and bacillus lactis aërogenes; after long exposure it kills pathogenic germs; at 80°C. it coagulates albumen and changes the taste and odour of the milk. Even at 70°C. it changes casein so as to impair its value for dairy purposes. In boiling, a part of the albumen is deposited, the lecithin is destroyed, the fat altered both chemically and physically. Serious changes appear to take place, through long boiling, both in casein and nuclein. High temperatures continued for hours are required to destroy some of the long-lived spores; their injuriousness, however, is not entirely clear. Boiled, pasteurised, or sterilised cow's milk is never woman's milk; it is not a curative agent; it presents, however, the great advantage of destroying fermenting and pathogenous germs; that is why it is indispensable in large cities and during the prevalence of certain epidemics, and wherever fresh and unpolluted milk is not accessible. When employed as exclusive infant food, cow's milk, watered or not, is liable to cause constipation, or diarrhoea, rickets and scurvy. To preserve its antibacterial effect, heat should be followed by immediate and rapid cooling, but not freezing. Ample dilution of the artificial food of the infant, and particularly of the newly-born, is required because of the heterogeneous composition of cow's milk; even those who are as usual put to an incompetent breast require water to combat loss of weight and the tendency to nephritis and to nephrolithiasis, the former of which is still more frequent than the latter—indeed, very frequent. A large amount of liquid does not interfere with the motility of the stomach and does not cause dilatation—first, because the normal infant is no glutton, and secondly, because absorption begins at once. Easy and equal digestibility of the casein in woman's and in cow's milk is either asserted or denied by good observers. When cereal decoctions are mixed with cow's milk, its casein is claimed and proved to precipitate in fine tufts. On the other hand, cereals are said to have no such effect any more than water. Water, however, is recommended by the same authors as addition to cow's milk. This contradiction is met by those who recommend dextrinised flours for the dilution of cow's milk. The digestibility of a certain amount of amyllum, such as is contained in cereals, has been erroneously and persistently denied, when it had long been proved both by experience and by experiments to exist. Cereal decoctions are the proper diluents for the surplus casein of cow's milk. Milk sugar is partly absorbed in the stomach, partly in the intestine, partly changed into lactic acid. It is required for digestion, and is an antiseptic. Not enough of it, however, can be given to have the latter effect to the same degree that is exerted by flours. Besides, milk peptones disappear with acid fermentation. That is why milk sugar should not be given in large quantities, but other carbohydrates in its stead. Cane sugar should take its place particularly, as for the purposes of digestion there is milk sugar enough in cow's milk that forms part of every artificial food, and because

there is a ferment in the intestine of the young which inverts cane sugar and renders it absorbable. Besides, every other carbohydrate has the same power to protect albumen against putrefaction. Fat is added to cow's milk for the alleged purpose of increasing its nutritive property (by preventing the loss of the fat and albumen of the tissues), and by loosening and separating the minute particles of casein. It should be remembered, however, that even human milk contains often so much fat as to cause "fat diarrhœa;" that the normal infant fæces eliminate unchanged fat in goodly quantity; that, moreover, the fat globules of cow's milk are larger, less numerous, and less absorbable than those of woman's milk; that the two fats are not equal chemically; and that the urine is liable, after feeding with cow's milk fat, to contain ammonium and the gut toxins. The mineral constituents of cow's and human milk are different. The addition of chloride of sodium to artificial foods is required both for physiological and chemical reasons. Home-made artificial foods are preferable to the proprietary foods of the market, for many reasons. The separation of the component parts of cow's milk by mechanical means, and the recombination of the same, is a procedure of doubtful value. Experience of the physician and of the well directed public is equivalent at least to laboratory and library theories based on facts that are *sub judice*.—*British Medical Journal*.

RECTAL ALIMENTATION.

For how long a period rectal alimentation should be administered depends upon the condition necessitating it. In ulcers and irritating affections of the stomach rectal alimentation will be administered alone without any additional nourishment through the mouth for a period varying from one to two weeks, when the natural mode of nutrition will be cautiously resumed. In cases in which there is an organic obstacle within the œsophagus or at the pylorus preventing the passage of food into the intestine, rectal feeding must be carried on as long as the impediment exists (in operative cases until a few days after the operation has been performed—in inoperable cases indefinitely). Here, whenever possible, besides the enemas, small quantities of liquid foods may be given also by way of the mouth.

Shortly after the operations on the œsophagus, stomach, and small intestines, rectal alimentation must be administered for a period varying from four days to a week or ten days.

Before administering the feeding enema, a cleansing injection, consisting of a quart of water and a teaspoonful of salt, should be given early in the morning, in order to thoroughly evacuate the bowel. One hour later the first rectal alimentation may be administered. The feeding enema is best injected by means of a fountain or Davidson syringe or a plain, hard-rubber piston-syringe, and a soft-rubber rectal tube which is introduced into the anus five to seven inches. The injection should be administered slowly, without much force. After the withdrawal of the tube from the rectum the patient is told to lie quietly and to endeavor to

retain the enema. The quantity of the feeding enema may be from 5 to 10 ounces. Three to five such enemas may be given daily.

The following substances may be used as feeding enemas:—

(a) The different kinds of peptones and propeptones in the market (Rudisch's or Kemmerich's peptone, somatose, sanose), of which about 2 or 3 ounces, dissolved in 6 to 8 ounces of water, are injected. The different beef-juices (Valentine's beef-juice, bovine, Mosquera's beef-jelly, etc.) may also be dissolved in water and injected in corresponding quantities.

(b) The milk-and-egg enemas: 6 to 7 ounces of milk, 1 to 2 raw eggs well beaten up in it, 1 teaspoonful of powdered sugar, and $\frac{1}{4}$ of a teaspoonful of common table salt. Pancreatin (one tube of Fairchild's pancreatin) may be added to such an enema, which will facilitate its assimilation.

(c) Meat-pancreas enema: Leube employs enemas consisting of well chopped meat (5 ounces), fresh pancreas (2 ounces), 1 ounce of fat (butter); all these ingredients thoroughly mixed with about 6 ounces of water.

Instead of always using one and the same nourishing enema the above compositions may be alternately administered.

In conjunction with these food-enemas, injections of water into the bowel are made in order to increase the amount of fluid in the system. These injections of water for absorption are of great importance. Usually saline solutions are employed, in quantities varying from a pint to a quart, which may be given twice a day. Max Einhorn (Post-graduate, July, 1900).—*Monthly Cyclopaedia*.

FEMALE SPERMATOZOIC IMMUNITY.

There is something startling in the suggested possibilities involved in recent experiments by Metschnikoff regarding a serum method of securing immunization against spermatozoa. And yet, if we look upon the individual cells of an animal as essentially independent units, and upon bacteria as animal in character, the span from bacterial immunity to physiological cellular immunity becomes quite short, and the analogy between the two seems natural and close. Skutsch ("Fortschritte der Medicin," May, 1900,) says, reviewing an article by Moxter, "Deutsch Med. Woch.," 1900: "Since it has been found possible to immunize the lower animals by the use of a specific serum, not only against bacteria, but also against physiological elements, *e.g.* white corpuscles, milk cells, erythrocytes, ciliated epithelia, etc., the question has arisen, What is the normal relation of the organism to the spermatozoa, and is the relationship changed when spermatozoa have been taken into the body by resorption?"

"According to Metschnikoff, sheep spermatozoa in normal salt solution, injected into the peritoneal cavity of a guinea pig, lose their mobility very much more quickly if the guinea pig has been previously subjected to a hypodermic injection of sheep spermatozoa. The sperm cells are not dissolved, and hence we have to do, not with a spermatolytic

but with a spermatocidal process. The blood of the injected animal is not the functioning agent. Spermatozoa brought into contact with the serum of normal animals and with that of animals treated with sheep serum lose their mobility in each instance in from two to six minutes. On the contrary, when the serum of animals, treated as described, is injected into the peritoneal cavity of normal animals, a stronger spermatocidal effect is observed than when the serum of normal animals is used. Experiments upon animals have shown that the immunizing serum seems to have no special effect upon other cells, except that it has a strong hemolytic action upon the blood corpuscles of the sheep.

"The antagonistic agent contained in the immunizing secretion has not only a destructive action upon the spermatozoa, but also a specific hemolytic action. Its affinity for the spermatozoa is greater than for the blood corpuscles, for when spermatozoa and blood corpuscles are added to the serum, the latter are not affected at all. Its affinity, however, for the spermatozoa of animals other than the sheep is comparatively very slight.

"In addition to the properties already named the serum has the specific property of causing the agglutination of the spermatozoa of the sheep."

It is not clear from the above whether Metschnikoff, in stating that "the immunizing serum" seems to have its peculiar effect upon the sheep only, refers to sheep serum or that of other animals.

It is quite plausible that the spermatocidal effect might apply only to animals of the same species, while its failure, when crossed to different species, would not offer an *a priori* invalidization. But it certainly would not appear plausible that this immunization takes place only in sheep, and not in other animals treated with a similar serum obtained from their own class. It is a long way from what has been accomplished to the determination of the thousand and one questions intermediate between this and that of final immunity of the ovum against spermatozoic influence.

The work already performed is, nevertheless, of profound interest, and much further light does not seem difficult to obtain.—*Obstetrics*.

CAUSES OF AMENORRHOEA.

Dunning mentions tuberculosis and Bright's disease as among the common causes of amenorrhœa, and says that the prevalent idea that amenorrhœa causes tuberculosis is most fallacious. He discusses the general and local causes, since he believes that any efficient treatment of amenorrhœa must be based upon the correct knowledge of the lesion producing the disease. He emphasizes the fact that active efforts by the administration of powerful emmenagogues are harmful, especially in cases of Bright's disease and tuberculosis; for such a course is liable to result in congestion of the pelvic organs and the development of new and distressing symptoms, and all efforts to restore the function will be unavailing unless one can arrest and overcome the ravages of these diseases.

Amenorrhœa following acute and debilitating diseases need not, as a rule, occasion the serious apprehension of physician and patient. Here the chief end should be to restore the health of the patient after the intensity of the attack had passed. In anæmic, overgrown girls, or in chlorotic cases, food rich in blood-making properties should be directed and a high state of activity of the digestive and assimilative functions maintained, and the bowels, skin and kidneys should be kept in an active and normal condition. With the disappearance of anæmia and the oncoming of good health, the menstrual function is, as a rule, established. If it is not, mild emmenagogues are often beneficial. Potassium permanganate in one and two-grain doses is quite efficient.—*Philadelphia Medical Journal*.

POST-PARTUM HAEMORRHAGE.

Upon this important subject E. Stanmore Bishop, F.R.C.S., of Manchester, Eng., contributes an excellent paper to the Medical Brief. His methods are, in short, elevation of the foot of the bed and compression of the abdominal aorta. We extract the following passages:—

"Blood is being poured out from a multitude of small vessels, arteries and veins, deep down inside a hollow viscus. But all these vessels are merely branches of two great trunks—the vena cava and the aorta. They come from no other source. There is no other source possible. In ordinary cases of bleeding, what are our infallible means, and our only means of its arrest? If blood is coming from veins, elevation of the part of the body containing those veins until it is on a much higher level than the heart. All venous bleeding is immediately stopped by this manœuvre. Do we not always trust to this in the hæmorrhage from a burst varicose vein, and do we ever find it fail? That here there are more veins than one makes not a particle of difference. Elevate the foot of the bed. Elevate it high. Do not merely put a brick under each leg. That is not elevation which is to do any good, it is mere perfunctory compliance with the letter of the advice. Elevate the foot of the bed until the uterus is six or eight inches above the heart; so best will you deal with the *venous* outflow.

"And the aorta is reached with consummate ease in these cases. The abdominal wall is unusually supple. It has been stretched for months by the steadily enlarging uterus. It has not yet recovered, and will not for many days recover its tone. It yields easily to pressure from without, and the hand readily finds the vessel, and can easily isolate, and compress it *alone* against the left side of the prominent spinal bodies."

This pressure gives absolute command of arterial bleeding from the uterus.

"No man who has not personally tried this plan can have any idea of the increased force in the aortic beat as felt by the compressing hand, after even a quarter of an hour's control."—*The Medical Bulletin*.

PERFORATION IN TYPHOID FEVER FROM AN OPERATIVE STANDPOINT.

G. G. Davis (*American Journal of Surgery and Gynecology*, September, 1900) says the subject of operating for perforations in typhoid fever is still so recent that additional experiments and data are desirable to enable us to formulate rules of procedure. Leucocytosis is a confirmatory sign. Hemorrhage is accompanied with a sudden fall of temperature, but not by a sudden increase of abdominal symptoms. Dulness in the right iliac region is not to be expected in cases of perforation. Localized impairment of resonance may be due to free abdominal fluid; change of position causes it to disappear. Localized pain and dulness may be due to a plastic peritonitis around the site of perforation. This may be observed perhaps in one case in ten, possibly one in five. It is impossible to recognize that a perforation is about to occur. It is not necessary to operate before a perforation occurs, but it is necessary to operate before collapse is marked. Typhoid fever patients when not in total collapse bear operation much better than was formerly expected. Patients operated on in marked collapse are liable to die on the table. I know of some such cases. Washing out the abdominal cavity with hot normal salt solution even if no perforation is present, seems to improve the condition of the patient at the time of operation, and to favorably influence the subsequent course of the disease. Operate as soon as the diagnosis of perforation is made. It is less dangerous for the patient to run the risk of having an operation done during the first period of depression than to wait and run the risk of having collapse preclude all operative measures. In operating incise as for appendicitis, and not in the median or semi lunar line.—*The Medical Age*.

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

The first regular meeting of the Toronto Clinical Society was held in St. George's Hall, Elm Street, on Wednesday evening, October 3rd, Dr. W. H. B. Aikins, the President, occupying the chair.

PRESIDENT'S ANNUAL ADDRESS.

After thanking the Fellows for the honor conferred on him in his election to the presidency, he referred to the honor brought to the Clinical Society and to Mr. Cameron who had lately received the honorary distinction of F.R.C.S., thus making three members of the Society who now held that proud distinction. Reference was also made to Dr. G. S. Ryerson's work in South Africa. Dr. Ryerson by his devotion to the Red Cross organization, had brought great credit to the Clinical Society as well as to the whole profession in the Dominion of Canada, and had advanced the profession of Canada in the eyes of the world. The conclusion of the introductory remarks of the president was a plea for the better consideration of mental or suggestive therapeutics, which, although connected with a great deal of foolishness in the past, was now being considered on a more scientific basis. He thought it should receive the same recognition as other agents, as it was of value in diagnosis as well as in treatment. The very fact of the physician visiting a patient every morning, even although no medicine was being given, was an important item in the way of recovery of the patient.

THE MEDICAL SIDE OF THE SOUTH AFRICAN WAR.

Dr. G. Stirling Ryerson gave an interesting address on the above subject. This side of the war had not been written on to the same extent as the surgical side; and although his business in South Africa was not medical in its character, he was still able to acquire a certain amount of information which might be of general interest to the profession. Up to July 25th, no less than 31,305 have been treated in the base hospitals with 362 deaths; and it is not far from the truth to say that 100,000 men have passed through the hospitals from disease alone. This emphasizes the fact that the physician is required more than the surgeon in war; 4,867 officers and men have died of disease up to the 25th of July; 3,463 were killed in action or died of their wounds. The statistics of this war compare most favorably with those of other wars, as for instance in the Crimean war 4,602 were killed, while 17,580 died of disease. Others were quoted, which Dr. Ryerson said made a favorable showing for the present war. Referring to the condition of the camps at Modder River,

the soil in that district is of an exceedingly light character, easily pulverized, and this mixed with excreta was wafted into the men's tents and into their mouths, etc. Their meat was literally black with flies and covered with dust. The water was muddy and drawn from the Modder River, probably infected by the Boers higher up, resulting in an outbreak of enteric fever. The camps contained from two hundred to three hundred men, in the ordinary position, close together, with nine or ten men in a tent. More than that there is the fact of urination and defecation after dark. The men will not take the trouble to go one hundred or even fifty yards to the latrine, but urinate and defecate in the neighborhood of the tent. This is wafted into the dust and thus becomes mixed with the food. He spoke of the circular dust storms, nothing being able to keep the dust out. This was the way in which infection was carried, and then the men were exhausted after long marches. They had had little food of imperfect character, and had been living on one or two biscuits a day. They were thoroughly used up and in a position to acquire any disease that might be going. Regarding the disease itself it seemed to present the ordinary appearance, no special characteristics to be observed. The blood test was used in many cases. Regarding the question of immunity after inoculation, or by the hypodermic injection of serum, very careful accounts have been kept in the hospitals of those inoculated and those who were not; and while statistics have not yet been published, where they were inoculated once or twice, especially twice, they avoided the disease or had it mildly. Dr. Ryerson mentioned the case of an officer who had been inoculated twice who contracted the disease but recovered. The opinion is that inoculation is preventive. With improved serum we may be able yet to prevent this great scourge of armies. In addition there is endemic enteric, especially in Bloemfontein, therefore there are local causes also. The treatment of typhoid was practically the treatment which is adopted in Toronto and everywhere else. Disinfection of the bowel either by means of listerine or boric acid, taken internally, or enemata were considered in many cases to be remarkably successful. Another form of treatment was that of starvation. They were starved for seven or eight days. He considered that in some cases it might be dangerous, because a number of the men were exhausted when brought in. Nothing whatever to eat for seven days was their treatment, nothing at all except water, and all of that they could drink. The medical officer in charge of these cases, and under whose supervision this plan of treatment was carried out informed Dr. Ryerson that he had fewer deaths than in any other hospital in Bloemfontein. Dysentery: this was another very prevalent disease, and you hear of a great many men affected with this disease when they merely had ordinary diarrhea. The number of them was comparatively few. The treatment of dysentery out there usually employed was pretty thorough purging by means of castor oil, followed by Dover's powder, and in many cases it was found to work extremely well. Syringing, etc, did not work so satisfactorily. Sulphate of magnesia in drachm doses, frequently repeated, was successful—one in an hour or one in two hours. These two forms of treatment were the most satisfactory of anything used there. The tenesmus, etc., was always

causing a great deal of annoyance. This was chiefly treated by free enemata and some form of narcotic. Another special form of fever, which is endemic out there, was a form of fever resembling Malta fever. Dr. Ryerson believes this to be really a form of malaria, because it was ushered in with a chill followed by high temperature—a rising temperature at night and a falling temperature in the morning, attended sometimes with diarrhea, afterwards attended by pain in all parts of the body and followed by intense prostration. It seems to demoralize the red blood corpuscles. The patient is as white as a ghost when he comes through it. The pallor is intense, and the prostration great which follows it. Another form of fever and that is continued fever, in which there is a very slight rise at night and fall in the temperature in the morning, and which lasts usually three weeks, and forms a very large proportion of the cases going to hospital with fever. No case has ever been followed by death, and it is not followed by that intense anemia of veldt fever. Referring to the medical orderlies in time of war Dr. Ryerson stated that there was no duty which was so disgusting, and at the same time so trying and tiresome as that performed by these men. Dealing with the cases of enteric fever, for instance, when a man has seventeen or eighteen motions a day, and an orderly has twelve to twenty men to attend to, the duty is very trying indeed, but Dr. Ryerson believes that these men performed their duty well. The treatment of the surgical case, as compared with the enteric, is simply fun for the orderly. With the modern bullet wound there is very little dressing required; but, of course, when there is destruction of the bone there is more to be done. The conduct of these orderlies has been of the most noble character. Answering an inquiry of Dr. A. A. Small, Dr. Ryerson stated that pneumonia was not common during the early period of the epidemic; but later, on when the wet weather set in, pneumonia became a very constant accompaniment. Then, ten or twelve men would be carried out during the course of the day as a result of that complication.

Dr. Peters asked regarding Miss Kingsley's report in the *British Medical Journal* as to whether there were any cases of typhus fever. Dr. Ryerson said that was a mistake; there was no typhus. He referred to the absence of small-pox. With an enormous army of 200,000 men, nothing proves more definitely and more emphatically the importance and power of vaccination when there never was a single case of small-pox in the entire army. There was small-pox among the blacks, but not a single case among the white soldiers.

Dr. Parsons requested further information regarding inoculation.

Dr. Ryerson—Inoculation was not compulsory, and so far as he was aware no Canadians had been inoculated. The serum was supplied by the Imperial Government authorities. The symptoms are practically those of typhoid: severe pain in the abdomen; temperature runs up to 102° or 103°; morning fall and evening rise, accompanied by prostration, furred tongue, loss of appetite, and general malaise. This condition lasted about a week. Some suffer more than others. There were no undesirable results that he heard; no mortality.

Dr. H. B. Anderson asked whether there were any epidemics among

horses, and referred to the cause of as many as five thousand horses being lost in one week.

Dr. Ryerson—Rinderpest has disappeared, and there was no foot or mouth disease. The animals died simply from exhaustion, or want of food.

RETRO-PHARYNGEAL ABSCESS WITH EXHIBITION OF PATIENT.

Dr. G. Silverthorn presented the patient and described the case. It occurred in a child who in July last was less than a year old. The child was born on July 18th, 1899, and had always been healthy and was of healthy parents. On May 17th, 1900, the child had measles, contracted from other children in the house, with a well-developed rash. In June—on the 2nd, 3rd and 4th—two weeks later, the child had a series of convulsions, five or six on the first day, about two on the two succeeding days. Dr. Silverthorn did not see the child in any of the convulsions, but arrived shortly after one or two; then the child was exhausted and the history of convulsions was marked. When examined by the doctor at this time there was a small lump on the right side of the neck below the ear, which appeared to be an enlarged gland. About a week later, on June 9th, the child had a boil on the right heel, which opened spontaneously and healed up. From June 2nd, the time when he had the first convulsion, until July 3rd, this lump below the ear on the neck gradually enlarged in size, and about the middle of June some softening was first noticed, and this condition—*i.e.*, the softening—got gradually worse. Towards the end of the month the child seemed feverish and restless. The last two weeks in June the child held its head quite stiff-like, and it even held its head up with its hand. About June 23rd there was some difficulty of breathing noticed, more especially at night. This dyspnea increased towards the end of the month, and towards the 3rd of July the child could not sleep except in snatches. No difficulty was noticed in nursing until July 3rd, but the difficulty seemed more in respiration than in swallowing. Inspiration and expiration were both noisy and laboring. The lump in the neck was now of considerable size and appeared to be solid, and had no distinct sense of fluctuation. On July 3rd Dr. Silverthorn considered the child was in a dangerous condition. He was afraid to examine the throat, as the abscess, if it was an abscess, might be ruptured, and in a child of that age, and with an abscess of that size it might prove fatal. Next day the parents consented to an operation and the child was removed to the hospital, and examined first of all without anesthesia. It was then given an anesthetic, as examination was not found practicable without it. One could feel perfectly well the bulging in the back of the pharynx. It was decided to make an incision through the side of the neck over the most prominent part of the tumor, and it was done in that situation. In making the incision we went through the fibres of the sterno mastoid, and dissecting down with a blunt instrument pus came out in very large quantities, and you could pass artery forceps from one side almost through to the other side. The child remained in the hospital for one week, and by the end of July the wound was healed up.

Dr. A. H. Garratt, in discussing the case, stated that Dr. Silverthorn had accounted symptom for symptom a'most similarly to a case occurring in his own practice. Hereditary syphilis, however, was in his child very well marked. His child is now two years of age and in a fairly good state of health.

Dr. Silverthorn stated that his child was not syphilitic; there were several other children in the family, and all were perfectly healthy.

Dr. George Peters related a similar case following scarlet fever. He agreed with Dr. Silverthorn that this case was glandular in origin and not osseous. You will hardly get carious disease of the spine that would undergo spontaneous recovery, and that points to the fact that the disease has not its origin in tubercular bone. The glands of the child may be enlarged on either side, and it may be due simply to a degree of ill-health in the child. These enlarged glands are not always tubercular. For pharyngeal abscess operation should be done as soon as the condition is diagnosed, and it should be done from the outside, and it is not always easy to strike the pus. It should be attacked through the planes of the neck in front of the sterno-mastoid, and dissecting very carefully between the vessels, trachea and thyroid gland. The external wound has to be pretty large. If the condition is not due to carious bone he thinks the prognosis good.

DISPLACEMENT OF THE LIVER, WITH EXHIBITION OF PATIENT.

Dr. H. B. Anderson presented this patient and recited the history of the case. It occurred in a young man of twenty-five years of age, who for some ten years had been the subject of repeated attacks of asthma. The family and personal history were good, although the patient was always delicate. During the summer of 1890 he worked on a farm and got very thin. He became troubled with catarrh in the nose and throat, and some wheezing. About the first of the following July he returned to the farm. In the fall of that year he got very fat, weighing 155 pounds. Catarrh became worse, with coughing fits at night, but no wheezing. During that winter he had an attack of pneumonia and pleurisy, followed by genuine attacks of spasmodic asthma. Polypi were removed from the nose, which relieved the catarrhal condition to a considerable extent. He had a second attack of right-sided pleurisy about Christmas, 1893, which lasted about three weeks. In May, 1894, a doctor told him that his liver was enlarged. He went to the North-West Territories in June, 1894. His asthma continued, and towards the end of the summer the attacks were more frequent and severe. He then began to suffer from indigestion. His bowels were irregular and mucus appeared in the stools. A doctor in the North-West examined him and told him his liver was displaced downwards. The patient took the Salisbury treatment for the digestive trouble with the result that his asthma improved to a considerable extent. His indigestion also got better. In November, 1895, he had another attack of right sided pleurisy, and he returned to Toronto in January, 1896. The asthmatic attacks returned that spring, and at this time the patient came under Dr. Anderson's care. The attacks were always preceded and accompanied by severe indigestion. Dr. Anderson examined him and

found the liver was very much displaced downward, appearing as a prominent tumor extending as low as the umbilicus. By manipulation the liver was returned to its proper position, and from the month of July of that year he was pretty free from the asthmatic attacks, and in a much more satisfactory condition than he had been before. He continued in this way pretty fairly well until this last July (1900) when he was again taken with very severe attacks of intense dyspnea. He went to Muskoka, but he became worse, and returned to Toronto about the first of August, when Dr. Anderson was called to see him again. At this time he complained of feeling a pressure in the epigastric region; a feeling of weight, of more or less tenderness, and he wanted to sit down all the time. He felt more relieved when he was sitting down, but had a peculiar feeling as if his food did not enter the stomach properly. There was no vomiting, and his bowels at this time were fairly regular. There was bloating after meals along with a flabby tongue, and he was now in a very miserable condition. On examining him this time the liver formed a very prominent tumor, the upper margin being above the free margin of the ribs, and the lower extending below the umbilicus. One could palpate the lower margin quite definitely. There was a tympanitic note over the normal liver region. It was quite visible to the naked eye; the patient could notice it himself. Attempted to replace it by postural methods, but was unable to do so. There seemed to be much retraction of the ribs on account of the difficulty of breathing, and on account of the dyspnea, that the attempt to replace it proved futile. The patient was put to bed on a low diet and he immediately began to improve. He also had an antispasmodic mixture. He continued fairly well, when he was taken a week ago with an attack of diarrhea, with a slight return of the asthma at this time. The liver, from the time Dr. Anderson saw him in August, did not return completely to its proper position, although it raised up considerably. It is higher now than it was in August, but it is still very much displaced. As to this condition of hepaptosis, it is said to be due to stretching of the ligaments of the liver, and may be congenital or acquired. The most able article on the subject is that written by the late Dr. Graham, where he describes seventy cases, an article delivered before the association of American physicians. The cases are mostly found in women, and particularly in those who have been through several pregnancies. Other causes are collections of fluid in the pleural cavities, subphrenic abscess, etc. Right sided pleurisy may be of some importance in this case, as he had it three times. This condition is usually accompanied with displacement of other organs, as in Glenard's disease or gastropnoia. The right kidney seems also to be lower than its normal position. Another cause of the trouble is spinal deformity. In some cases there are no symptoms except those of Glenard's disease. The patient complains of more or less weight or uneasiness in the epigastric region. This is the only case Dr. Anderson has seen associated with definite asthmatic attacks, and he thinks that here the displacement of the liver either acting as a reflex cause, or bringing about the digestive disturbances, may have had to do with bringing about the asthma. In the treatment of the case, rest seems to have had a very beneficial effect

in relieving his symptoms. He would like to have the opinion of the Fellows in regard to an operation, although it does not seem that much could be done, and besides that, there is the displacement of the other organs with which the condition is associated. Something may be done with abdominal support. The interesting point in this case is that it is associated with definite attacks of spasmodic asthma.

BULLET WOUND, WITH SPECIMENS.

Dr. G. Silverthorn presented these very interesting specimens. The course of the bullet is one of special interest. He first exhibited a portion of the anterior wall of the left thorax. On the left side, commencing one and five-eighths inches outside the nipple line, and on a line with the nipple itself, was the external wound, or wound of entrance, three-eighths inch wide. On following this wound backward the bullet was found to have punctured the fifth rib; had fractured it and torn up a portion of the upper edge of the fifth rib two and three-quarter inches from its junction with its cartilage. It then passed through the pleura and through the anterior angle of the upper lobe of the lung, and then through the pericardium, then along the left border of the heart, which is grooved up, and passed on backwards, tunnelling the fat in the auriculo-ventricular groove, then passing out again from the pericardium and backwards through the anterior portion of the lower lobe, and still backwards into the aorta, and just through the aorta opposite the ninth dorsal vertebra, with immense amount of hemorrhage in the posterior mediastium; but the bullet could not be found in any place. It could not be found apparently where it was lost, and an examination of the arteries was made, and the bullet was found in the left femoral artery, just below where the profunda femoris is given off. The bullet was a quarter of an inch in diameter, and in impinging the posterior wall of the aorta had perforated that wall, supported behind by the vertebral column, had fallen back into the blood stream, and either through the force of gravity or the force of the blood current, or both combined, had been swept on to the position in which it was ultimately located. The specimen of the artery was shown with the bullet *in situ*. The bullet was slightly deformed, probably from its force in striking against the rib.

GEORGE ELLIOTT,
Recording Secretary

MISCELLANEOUS.

Cough Sedative, Antispasmodic and Analgesic.

In epidemic bronchitis and all the various allied laryngeal affections, codeine is a most valuable remedy for relief from the harassing cough and pain, and when combined with antikamnia the analgesic effects are harmlessly emphasized. This combination is best administered in antikamnia and codeine tablets. No more favorable combination could be had in the cough of phthisis and chronic bronchitis. This is abundantly attested by clinical data which shows the combination to be the best succedaneum for opium.

Another advantage of codeine over morphine, one of special value in bronchial catarrh, is that the patients not only cough less, but also expectorate more easily than after morphine. The cough-dispelling power of codeine is such as to make it indispensable in phthisical patients, and a point of great importance in these cases is that it does not impair the appetite or digestion, and can therefore be used uninterruptedly for months. GEO. BROWN, A.M., M.D., Specialist Eye, Ear, Nose, Throat and Lungs, Atlanta, Ga.

The Clinical Significance of Oxaluria.

Robert F. Williams, in the *Maryland Medical Journal*, states that there is a paucity of literature upon this subject in recent text books. He quotes Beneke as stating that oxaluria has its toxic cause in impeded metamorphosis in that stage of oxidation which changes oxalic acid into carbolic acid; that the chief source of oxalic acid is in the nitrogenous food; that retardation of their metamorphosis may be caused by such conditions as the following: Excess of nitrogenous food, excess of starches and sugars, conditions diminishing oxidation by interfering with the proper function of respiration and circulation, depressed nervous conditions.

The author claims to have found two other sources than the derangement of metabolism according to Beneke, namely, the ingestion of calcium oxalate in the food, and its production by certain bacteria in the intestines. He devises the theory that calcium oxalate is changed into an alkaline solution and exists in the intestines in the form of crystals; therefore it must be absorbed in the intestines in the crystalline state, and circulate in the blood as such. Eliminated by the kidneys, it acts as a mechanical irritant which leads to the production of albumin and casts. The symptoms of an acute oxaluria, he says, closely resemble those of beginning nephritis. If the condition is not checked, it leads to chronic changes in the parenchyma of the organ, leading to the production of a chronic Bright's disease.—*Ex. New Eng. Med. Monthly.*

BALDNESS. Dr. Whitla, in the *Therapeutic Review*, says that one of the best combinations in the treatment of baldness consists of :

R. Pilocarp hydrochloratis	gr. v.
Otto rosæ	m. viii.
Ol. rosmarini	dr. iv.
Linimenti cantharidis	dr. iv.
Glycerini pru-ur	oz. i.
Ol. amygdalæ dulcis	oz. ii.
Spir. camphoræ	oz. iii.

M. Sig. To be rubbed well into the scalp night and morning.
—*Texas Medical News*.

PULMONARY TUBERCULOSIS. In an article on "The Treatment of Consumption," in the *International Med. Mag.*, Dr. W. Blair Stewart, of Atlantic City, N.J., says : "The basis of my treatment rests on a formula, which is frequently modified as follows :

R. Guaiacol carbonatis	gr. xv.
Strychnin sulphatis	gr. i.
Resin capsici	gr. iii.
Ammonii chloridi	gr. xxx.
Quinin bisulphatis	gr. xxx.

M. ft. capsule No. 30. Sig.—One every four hours."—*Med. and Surg. Bull*.

PILLS FOR GOUTY MIGRAINE. Dr. H. Bonmier recommends this pill :

R. Quinine valeriate	gr. 30.
Ext. colchicum	gr. 9.
Ext. digitalis	gr. 6.
Powd. aconite leaves	gr. 3.

M. Divide into twenty pills. One to be taken an hour before dinner, for five days in the week, with a glass of lithia water.—*Ex*.

STYES. The following prescriptions are given by Ohlemann in "Ocular Therapeutics:"

Hydrargyri chloridi corrisivi	3-20 gr.
Vaselini	7 drs. and 42 grs.

Misce et fiat in unguentum. Signa.—Ointment for eyelids.

Sulphur sublimati	46 grs.
Ammonii chloridi	15 grs.
Aqua rosa	1 fl. oz. and 5 fl. drs.
Spiritus camphora	1½ fl. drs.

Misce et fiat in collyrim. Signa.—For local use on eyelids.

Hydrargyri oxidi flavi	1½ grs.
Lanolin	1½ ozs.
Glycerin	q. s.

Misce et fiat unguentum. Signa.—Eye ointment.—*Exchange*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion : Established 1867.

Published on the 15th of each Month.

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EDITORIAL.

ANALYSIS OF THE URINE FOR THE DIAGNOSIS OF CHRONIC INTERSTITIAL NEPHRITIS.

That this important disease is frequently overlooked owing to imperfect routine methods of uranalysis must be apparent to those who have given the matter much consideration. In acute or sub-acute Bright's disease the clinical picture is so distinctive and the condition of the urine so characteristic that the diagnosis is a simple matter. The abundance of albumen and the presence of casts in a specimen of urine taken at haphazard make even the crudest tests and the most superficial examination sufficient to discover the disease. A simple qualitative examination is therefore all that is usually necessary in these cases, though it certainly does not furnish the information necessary to estimate either the severity or the progress of the disease that might be obtained by more thorough methods. In interstitial nephritis, however, we have a very different condition to deal with. Here we have one of the most

stealthy and insidious of diseases, frequently remaining latent for years until the malady is far advanced. The patient may appear robust and in excellent health with no symptoms sufficiently serious to alarm him until an attack of apoplexy, or uræmic coma or convulsions supervenes. The physician then apprises him or his friends that an advanced stage of chronic Bright's disease is present and the end not far distant, the time having passed when therapeutic measures are of much avail. It is well known how frequently the disease is found *post mortem*, with even the most marked pathological changes in the kidneys and vascular system where its pre-ence was quite unsuspected during life. Selecting, as it so often does, persons in the higher grades of society, the overworked, overfed and worried man in business or professional life, its recognition is a matter of especial importance. A life at high tension with insufficient exercise and rest is generally recognized as a very important factor in the causation of the disease. This is particularly important from the point of view of life insurance, as the persons in this country able to carry the largest risks are the very ones most subject to the malady; yet it is notorious that the routine methods of urinary analysis required by insurance companies are entirely insufficient for its detection, as they ignore the most elementary and essential points of a proper examination. For the diagnosis of chronic Bright's disease a quantitative analysis of the total amount of urine excreted per diem is absolutely essential if mistakes are to be avoided. The characteristic features of the urine are well known. From the beginning it is increased in quantity, light in color, transparent, low in specific gravity and tends to become more so as the disease advances, deficient in urea and phosphates, albumen in small amount is intermittently present and hyaline and granular casts are found on microscopic examination. The night urine particularly is increased, often approaching, and at times exceeding, the amount passed during the day. The deficiency in phosphates is a very important feature upon which much stress has recently been laid, many authorities looking upon this as a more constant and significant sign than the presence of albumen.

For a satisfactory examination it is therefore necessary that the total urine voided in the twenty-four hours be collected and a specimen of the mixed urine be submitted for examination. In this way all the facts for an opinion, so far as uranalysis is concerned, may be arrived at. The total quantity is known, the amount of the various constituents may be estimated, and the trace of albumen that is intermittently present and yet is so important an indication of the condition, is much less likely to escape recognition. In this disease the more delicate tests for albumen are advisable as the smallest trace is of diagnostic signifi-

cance. The phosphates are readily estimated by the simple centrifugal method described by Purdy, and the centrifuge is also very useful—in fact almost a necessity, in obtaining the sediment for microscopic examination.

If the simple expedient of submitting for examination the total quantity of urine passed per diem was resorted to in routine practice we do not hesitate to say that many failures to diagnose chronic interstitial nephritis would be avoided.

EDITORIAL NOTES.

Trinity Medical Banquet.

The twenty-third annual banquet of the faculty and students of Trinity Medical College will be held at the Temple Café on Thursday, November 15th.

Normal Saline Solution in Shock.

In the *American Practitioner & News* for Oct., Ed. Smith, M.D., contributes an article on the use of normal saline solution, in surgical operations for the avoidance of shock, the distressing effects of thirst and for its stimulating effects. Transfusion has been used successfully in septic conditions, in puerperal eclampsia and in fact all cases where the usual so called heart stimulants have formerly been used the normal saline solution being found to be much more effectual and infinitely safer. He describes in detail each method for its employment and gives as contra indications, atheroma, arteriosclerosis, cardiac degenerations, bad valvular disease and recent cerebral apoplexy.—T. C.

Death of George Chessel.

A familiar figure around the Toronto General Hospital for the past twenty years has been removed by the death, from chronic Bright's disease, of George Chessel. Old students at the Hospital will remember him better as Charlie, the porter in the morgue. Dr. O'Reilly, superintendent of the Hospital, many members of the Hospital staff and a large number of the employees, paid their last respects to an old and faithful servant by attending the funeral.

Hay Fever.

In the October number of the *Laryngoscope*, Dr. Scott Bishops contributes an interesting article upon this topic, which is timely at this season, and in which he discusses the use of nitro-muriatic acid and the eliminative treatment

Nitro-muriatic acid may be prescribed in doses of three to five drops of the freshly prepared concentrated acid after meals, and sometimes at night. This is diluted in half a tumbler of water. After taking this dose the mouth may be rinsed with water and another tumbler drunk.

This treatment has the effect of precipitating the uric acid from the blood and storing it in the more alkaline tissues, such as the liver, spleen, cartilages, joints and fibrous tissues, out of which it becomes dissolved into the blood during the hours of inactivity. This treatment should therefore only be given for temporary relief, only during the attack, and should give way to the eliminative treatment after the attack subsides, or else it will only defeat the ends of treatment. A uranalysis should be made in all cases of hay fever, to determine any excess of uric acid as compared with urea, the relative proportion in health being as one to thirty-three. The eliminative treatment aims at throwing the uric acid out of the system, principally through the kidneys.

The patient should then avoid meat and sweets as much as possible, and take 20 to 30 grains of lithia a day with a generous amount of water. The lithia may be taken morning and evening and after meals also. Sufferers from hay fever are apt to be over-feeders in animal diet.

Meals of meat should be rare, not over twice per week. With regard to water, it is important that an abundance be taken every day—as nearly a gallon as is possible. This dissolves the uric acid out of the alkaline tissues, and in a largely diluted condition carries it out of the body through the kidneys, skin and bowels.

GIBB WISHART.

The American Electro-Therapeutic Association.

The tenth annual meeting of the American Electro-Therapeutic Association was held in the Academy of Medicine in New York City on September 25, 26 and 27, 1900. Dr. Walter H. White of Boston, Mass., proved an ideal president, and Dr. Robert Newman as chairman of the committee on arrangements, had made ample provision for the comfort and entertainment of the visitors. The members were welcomed to New York by Acting Mayor Hon. Randolph Guggenheimer and by Dr. Louis F. Bishop, secretary of the Academy. Dr. Charles R. Dickson, of Toronto, responded to the address of welcome on behalf of the association. A large number of papers were read, and the discussion was at all times very general; the attendance was most satisfactory, and the meeting altogether proved to be one of unusual interest.

The report of the committee on Electrodes was presented by the chairman, Dr. C. R. Dickson of Toronto, and its recommendations adopted.

There were two special discussions arranged for. "Electricity in Gynecology, and the Present Reluctance of Gynecologists to use Electricity"; under which the following papers were presented before the general discussion: "The General Office Work of a Gynecologist," by Dr. H. F. Morse, of Melrose, Mass.; "The Morton Wave Current," by Dr. W. B. Snow, of Atlantic, Ga.; "Nervous Disorders Peculiar to Women," by Dr. G. B. Mas-

sey, of Philadelphia, Pa.; "Use of the Continuous Current and Electrolysis," by Dr. R. Newman, of New York; "Spark Gap Currents, viz.: Franklinic Interrupted, Static Induced, and Wave Currents," by Dr. W. J. Morton, of New York. A second special discussion was on "Electricity in Tuberculosis and Present Modes of Treatment," considered as follows: "Etiology of Tuberculosis; its Course and Termination," by Dr. S. A. Knopf, of New York; "The Modern Treatment of Pulmonary Tuberculosis," by Dr. M. J. Brooks, of Stamford, Conn.; "Electric Light as a Therapeutic Agent," by Dr. C. O. Files, of Portland, Me.; "Electric Light; its Physiological Action and Therapeutic Value in Tuberculosis of the Throat and Lungs," by Dr. W. Freudenthal, of New York; "Report on the Practical Value of Grotte's Method and of Others who Advertise Cures," by Dr. E. LeFevre, of New York. A committee was appointed to investigate the method of Mr. Grotte, consisting of Drs. Newman, Morton and Heuel, of New York.

Other papers read were "Electro-Therapeutic Sins," by Rev. Newman Lawrence, M.I.E.E., of Stapleton, Staten Island; "Some New Appliances for X-Ray Work," by Mr. E. W. Caldwell, E.E., of New York; "Plea for a Better Application of Electricity in Disease," by Dr. J. G. Davis, of New York; "Combined Electrization, or Galvano-Faradization," by Dr. A. D. Rockwell, of New York; "Gleanings in the Field of Electro-Therapeutics," by Dr. C. O. Files, of Portland, Me.; "Illustrations of the Value of the Cataphoric Method in Cancer," by Dr. G. B. Massey, of Philadelphia, Pa.; "The Causes of Some Cases of Neurasthenia, and Their Treatment," by F. B. Bishop, of Washington, D. C.; "X-Ray Photography," by Dr. E. R. Corson, Savannah, Ga.; "Electricity in Brain Failures," by Dr. D. R. Brower, of Chicago, Ill.; "Electro-Therapy of Insanity," by Dr. A. T. Livingston, of Jamestown, N. Y.

A lecture on "Methods of Generating and Transforming Electric Currents for Therapeutic Uses," by Mr. C. T. Child, E.E., Technical Editor of *The Electrical Review*, New York, was delivered by Dr. C. R. Dickson, in the absence of Mr. Childs through illness.

The following officers were elected for 1901: president, Dr. Ernest Wende, of Buffalo, N. Y.; first vice-president, Dr. F. H. Morse, of Melrose, Mass.; second vice-president, Dr. D. R. Brower, of Chicago, Ill.; treasurer, Dr. R. J. Nunn, of Savannah, Ga.; secretary, Dr. G. E. Bill, of Harrisburg, Pa.; to replace retiring members of the executive council, Dr. F. B. Bishop of Washington, D. C., Dr. W. H. White, of Boston, Mass. The association will meet in Buffalo, N. Y., in September, 1901, on a date to be fixed; arrangements are already being made for the next meeting.

PERSONAL.

Dr. W. H. Taylor (Trinity '97) has opened an office in Port Dover.

Dr. H. L. Barber (Trinity, '92) of Emsdale, is opening an office at Burk's Falls.

Dr. J. T. Duncan of Bloor street, Toronto, has returned from a visit to California.

Dr. L. G. Parker, Sherbourne street, Toronto, has returned after a four months' vacation in Europe.

Dr. A. S. Tilley, of Bowmanville, who was operated on for an acute attack of appendicitis in the Toronto General Hospital, is progressing very satisfactorily.

Dr. Andrew Haig (Queens, '91) who has been practising in Campbellford, has been appointed Superintendent of the Kingston General Hospital in place of Dr. Jas. Third, resigned.

Dr. C. M. Stewart (Trinity '98), late house surgeon at the Toronto General Hospital, has passed the final examinations of the Conjoint Board, London, and has been admitted an M.R.C.S. and L.R.C.P.

We are glad to note that Dr. Joe Jordan (Tor. '00) was among the members of C Company, R.C.R., who returned to Toronto last week, none the worse for his wound and subsequent illness.

Dr. Donald McGillivray, lately of the resident medical staff, Toronto General Hospital, has recently passed the examinations of the Conjoint Board, London, and been admitted M.R.C.S. and L.R.C.P.

Dr. Donald J. Armour, F.R.C.S., M.R.C.P., a past resident assistant in the Toronto General Hospital, and for some years Demonstrator of Anatomy in University College, London, has been appointed to the anatomical staff of the Medical Faculty of the University of Chicago, under Dr. Lewellys F. Barker.

Dr. H. G. Barrie (Trinity '98), Y.M.C.A. representative with the Royal Canadian Regiment, won for himself an enviable reputation among the men for his work in South Africa. Before landing at Halifax the members of the regiment aboard the Idaho presented him with a purse of \$500 as a practical expression of their appreciation.

We are pleased to announce to our readers the addition of two new members to our editorial staff in the persons of Hadley Williams, M.D., F.R.C.S., of the Western University Medical Faculty, London, and J. Coplin Stinson, one of the best known surgeons of San Francisco. We feel sure that our obtaining the services of two men so well and favorably known to the Canadian profession will add greatly to the editorial strength of THE LANCET.

Dr. F. H. Brennan (Trinity, '85) formerly of Peterborough, Ontario, has been paying a visit to his native town. Dr. Brennan went to Johannesburg five years ago, where he had worked up a good practice before he was forced to flee the city on the outbreak of the war. He secured a place in the Army medical service. The doctor was offered the Conservative nomination in East Peterborough for the recent elections, but owing to his decision to return to South Africa, he could not accept.

Among our countrymen who have been distinguishing themselves in the field of medical literature we are pleased to see the name of Dr. Wolfred Nelson, of New York. Dr. Nelson has contributed the article on Yellow Fever in the Twentieth Century Practice of Medicine—a most interesting and instructive account of the disease. Dr. Nelson graduated at McGill and Bishops' College in 1872. That he has not forgotten the land of his nativity is shown by the fact that he is now president of the Canadian Society of New York, among the members of which are over a score of Canadian medical graduates resident in the metropolis.

OBITUARY.

We regret to note the death on October 11th of the wife of Dr. Wm. Glaister, of Wellesley, Ontario. The deceased was a daughter of the late Dr. Morton, of the same place.

DR. R. H. WHITE.

We regret to note the death of Dr. R. H. White, who graduated at Trinity University in 1891. Dr. White was born in Milbrook, Ontario, and after graduation in medicine took up practice in New York, where he was appointed physician of the New York Throat, Nose and Lung Hospital, and had established a large practice in his special line of work.

DR. WM. FREEMAN AND DR. ALLAN C. SLOANE.

The medical profession of Ontario has lost two well-known members in the death of Dr. Wm. Freeman, of Toronto, and Dr. Allan Cary Sloane, of Annap.

Dr. Freeman practiced with marked success for many years in Georgetown. He retired from active work a few years ago and came to spend his remaining days in Toronto, where he died September 25th, at the ripe age of 70 years.

Dr. Sloane, who was 60 years of age, was forced to give up about a year ago after an attack of apoplexy, and went to live in Owen Sound. He had a second attack and died in a few days on August 23rd. His son, Dr. J. G. M. Sloane, is now in practice at Lion's Head, Grey Co.

ALEXANDER K. STURGEON.

The Town of Petrolia recently lost one of its most popular citizens and the profession an honored member in the death, from pulmonary haemorrhage, of Alexander K. Sturgeon at the age of 38 years.

Dr. Sturgeon was born at Florence, Ontario, and after a successful academic career, graduated at Trinity University in 1884. After spending a year in post-graduate work in Europe, he practiced successively in

Hagersville and Welland, removing to Petrolia in 1899, where he met with much success. In 1893 he was married to Elizabeth Isabel, daughter of W. K. Gibson, Esq., of Petrolia. Dr. Sturgeon held important local appointments, being Coroner for the County of Lambton and Medical Health Officer for Petrolia. He was also a prominent Mason. His kindly manner and unostentatious worth had gained for him the affection and esteem of the community in which he lived.

DUKE W. KESTER.

Another prominent member of the Ontario profession has passed away in the death, on October 21st, of Dr. D. W. Kester, of Ingersoll. Dr. Kester was a student of Trinity Medical College and graduated at Trinity University, after which he began practice at Mount Elgin. His ability, devotion to his profession and genuine worth soon gained for him the confidence of the community and a large practice. Owing to failing health he was unable to stand the strain of his large practice and consequently some four years ago he removed to Ingersoll, where he confined himself chiefly to office work.

About a month ago he developed typhoid fever, during convalescence from which pneumonia supervened, death resulting in a few days. The deceased, who was 46 years of age, leaves a widow and one son. Dr. Kester was a member of the Masonic fraternity.

The deceased was held in the highest esteem by his professional brethren, Doctors Williams, Neff, McKay, Caufield, and Rogers, and Mr. J. B. Coleridge, acting as pall bearers at his funeral.

VINCENT D. SULLIVAN.

Although in poor health for over a year the news of the death of Dr. Vincent Sullivan at Los Vegas, Texas, on Nov. 4th will come as a shock to his many friends in the medical profession. Dr. Sullivan was a graduate in Arts and Medicine of Queen's University, where he took the M.D.C.M. degree in 1892. He then spent some three years in post graduate work, principally in London where he passed the examinations for the M.R.C.S. and L.R.C.P. He returned to Kingston and was appointed to the Anatomical department of Queen's University Medical Faculty, in which position his excellent work and genial personal qualities made him extremely popular with his students. Developing pulmonary tuberculosis he was forced to resign his position and seek to regain his health. He went to Saranac Lake during the past winter where he improved considerably, returning home in the spring. He soon became worse, however, and afterwards went to Gravenhurst and latterly to Los Vegas, but all to no avail. Dr. Sullivan will be much missed. His kindly disposition, sparkling humour, genuine goodfellowship, and above all his real worth, gained for him hosts of friends wherever he went, who will learn with deepest regret of his early death. In the death of 'Vinney' Sullivan the profession has lost a good man—one whom it was a pleasure to know. His father, the Hon. Dr. Sullivan and his family will have the sincerest sympathy of all in the hour of their bereavement.

BOOK REVIEWS.

Practical Analysis and Urinary Diagnosis by Charles Purdy, L.L.D., M.D., F.R.C.S. (Kingston), Professor of Clinical Medicine, Chicago Post Graduate School, &c., &c. Fifth Edition, Revised and Enlarged. F. A. Davis & Co., Philadelphia.

The fifth edition of this excellent work has just appeared, fully revised and brought up to date.

The normal composition of the urine is first taken up, and the different theories as to the mechanism of secretion are dealt with; also the changes normal urine undergoes on standing.

The author then takes up abnormal urine, dealing fully with the albumens, albumoses carbohydrates, etc., their recognition and clinical significance. A particularly valuable part of the work is that dealing with centrifugal analysis for the quantitative estimation of albumen, phosphates, chlorides, etc. The author is to be congratulated on having furnished the profession with a simple, rapid and accurate method for the quantitative analysis of these substances.

Part II. is devoted to urinary diagnosis and should be a very valuable help to the clinician. The work concludes with a chapter dealing with the examination of the urine for life insurance, with rules for the guidance of examiners. T.C.

ENCYCLOPEDIA MEDICA.

Under the general editorship of Chalmers Watson, M.B., M.R.C.P.E. Vol. 1. Abdomen to Bone. Published by William Green & Sons, Edinburgh, 1899. Agents in Canada, Carveth and Co., Toronto.

This volume contains articles from the pens of T. Lauder Brunton upon "Angina Pectoris"; Byron Bramwell upon "Aphasia"; Dundas Grant upon "Auditory Nerve and Labyrinth," and from a well known Canadian surgeon, F. J. Shepherd, upon "Appendix Vermiformis," as well as from over thirty other authorities of note.

Where there are so many distinguished writers, it is not necessary to say anything with regard to the quality of the text. The work when completed is intended to represent the results and conclusions of medical investigation in the 19th century, and the names of the editor in chief and of the publisher are guarantees that this will be performed thoroughly.

The volume before us has, however, several points in the method of arrangement which are an improvement upon anything we have seen so far. The contents of each article are indexed at its head, and the list of literature bearing upon the subject forms a fitting conclusion. By this method much time will be saved to the reader. The volume is also of a convenient size—well bound and better printed—and the subjects are treated briefly and yet interestingly and exhaustively.

GIBB WISHART.

A TREATISE ON FRACTURES AND DISLOCATIONS,

For Practitioners and Students By Lewis A. Stimson, B.A., M.D., Professor of Surgery in Cornell University Medical College, New York. New (3d) Edition. In one octavo volume of 842 pages, with 336 engravings and 32 full-page plates. Cloth, \$5.00, net. Leather, \$6.00 net. Just ready. Lea Brothers & Co., Philadelphia and New York.

The fact that the last edition of this book published in 1899, was completely exhausted in about a year, speaks for its popularity. As a book of reference, to the surgeon it is of immense value. Formerly published in two volumes it has been condensed into one of 842 pages by the rigid exclusions of everything unpractical. There are numerous revisions and additions in the present edition—one of the most important of which is the article on traumatic haematomyelia. Fracture and dislocation of the vertebrae are discussed in a thoroughly practical way. For the specialist the splendid bibliography added to the work, will be most useful.

G. A. B.

BALLINGER & WIPPERN ON THE EYE, EAR, NOSE AND THROAT.

A Pocket Text-Book of Diseases of the Eye, Ear, Nose and Throat, for Students and Practitioners. By William L. Ballinger, M.D., Assistant Professor of Otology, Rhinology and Laryngology in the College of Physicians and Surgeons, Chicago, etc., and A. G. Wipperf, M.D., Professor of Ophthalmology and Otology in the Chicago Eye, Ear, Nose and Throat College. In one handsome 12mo. volume of 525 pages, with 150 engravings and 6 full-page colored plates. Cloth, \$2.00, net; flexible red leather, \$2.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The arrangement of this volume is excellent. By the use of small capitals to indicate "subject" words, the reader is enabled at a glance to catch the point he is in search of, and the usefulness of the text is thereby enhanced.

The clearness of type and the judicious selection of illustrations are also to be commended.

We have read a number of the articles with pleasure, and must especially note those upon "The Retinoscope," "The Mastoid Operation," and "Post-nasal Adenoids." While we do not agree with the author's view that "nasal stenosis is the most important cause of adenoids," or that it forms a factor at all, we have not elsewhere seen so clear a statement of the physiologic results of the presence of these growths.

No superfluous words are used, and yet without undue condensation, the reader is enabled to comprehend the subject clearly. This is a most important merit in a work that treats of so many topics in so few pages, and will recommend it to student and practitioner alike.

GIBB WISHART.

MEDICAL DISEASES OF INFANCY AND CHILDHOOD.

By Dawson Williams, M.D., London, Eng. Lea Bros. & Co., Philadelphia.

This last addition to the many new works on pediatrics is presented in very attractive form—the print and paper being extremely good—whilst the reading matter is quite up to date. The work will especially commend itself to students, not being full enough in etiology and pathology to be reckoned a reference handbook for practitioners, except in the subject matter of foods, baths, and prescriptions where a deal of time has been expended in thoughtful study of these necessary points.

The article on blood dyscrasia is extremely well written being condensed and at the same time lucid—whilst the plates illustrating the various types of corpuscles, as indeed all the illustrations, are beautifully finished. The price of the work, which contains 538 pages and 52 illustrations, is moderate \$3.50, placing it within the reach of all. A. B.

A MANUAL OF THE DISEASES OF THE EYE,

For students and general practitioners with 243 original illustrations including 12 colored figures, by Charles H. May, M.D., New York.

We think the author has succeeded in accomplishing what he endeavored to do, that is he has produced a concise, practical, and systematic manual, and although so small it can be carried in the pocket, it is explicit and comprehensive enough to be well suited for the use of the student or general practitioner. C. T.

PUBLISHERS' DEPARTMENT.

ANAEMIA, AND ITS RATIONAL TREATMENT.

By W. E. Holland, M.D., Chicago, Ills. Consultant, Mary Thompson Hospital, Assistant Gynecologist, Illinois Medical College.

From the standpoint of our present knowledge, there is no contesting the fact that in all forms of anaemia, iron, alone, or in combination with other recognized remedies, stands without a peer. The results accruing from its use, however, are in direct ratio to the assimilability of the preparation used.

The condition of the digestive organs during the administration of iron, and the consequent lack of power to utilize the remedies ordinarily prepared, have presented a very discouraging prospect for the patient and disappointment to the physician, who finds that nearly all the chalybeate compounds can be tolerated but a short time—much shorter than is necessary for the accomplishment of the desired result, producing almost invariably loss of appetite, irritability of the stomach, obstinate constipation, headache, etc.

With an experience of some time in hospital as well as private practice, during which I have been fortunately or unfortunately blessed with

an unusual number of complicated and apparently uncomplicated cases of anaemia, I have had the inclination and quite ample opportunity to test the various ferruginous simples and compounds as to their relative merits, and of all used preparations those of the solution of pepto-manganate of iron, for their acceptability, unirritating properties and relative efficacy, held deservedly undisputed sway and preference, until the preparation "Hemaboloids" was brought to my notice. Skeptical and slow to depart from well tried though not entirely satisfactory paths, I at last did experiment in a case that had resisted not only my efforts but those of a number of recognized therapeutists, and obtained unusually satisfactory results.

No irritation of the stomach, no anorexia no constipation, no headache, but, on the contrary, increase of appetite, regularity of the bowels, increase in bodily weight and red blood count.

The following is a record of the most obstinate case treated, which may be regarded as a fair specimen result obtained in upwards of twenty-five cases.

This case was of particular interest since the patient presented an exceedingly unfavorable tubercular history, her mother being affected at the time and two sisters having died of the malady.

Treated with Hemaboloids $3\frac{1}{2}$ after meals and at bed-time.

1st week,	weight	157,	Hem.	57%	R. B. C.	2,900,000	W. B. C.	8,500
2d	"	"	158,	"	60%	"	"	8,000
3d	"	"	160,	"	65%	"	"	8,000
4th	"	"	163,	"	73%	"	"	7,000
5th	"	"	162,	"	78%	"	"	6,500

Various preparations have from time to time been lauded for their effect upon the blood and the blood-making organs, and many of the old tried and new remedies have virtues of varying degree, and I have had a reasonable measure of success with all of them, but from the almost uniformly gratifying results from the use of the remedy just cited, it certainly has in my hands and from my experience been the remedy "par excellence" and well worthy of a trial in all those obstinate forms of blood impoverishment which resist other recognized treatment.

In closing let me further remark that in the treatment of these cases the necessity and benefit of carefully selected, concentrated diet, regularity of feeding, fresh air, salt baths and, last but not least, keeping the intestinal tract in an aseptic condition, must not be lost sight of.

THE MEDICAL TIMES.

BLOOD CURE OF CHRONIC GASTRIC CATARRH.

By T. J. Biggs, M.D., Stamford, Conn.

Sam. A—, age 34, English, admitted June 2nd, 1900. Diagnosis Chronic Gastric Catarrh. The case was sent to me by Dr. R—, he having given up all hope of doing anything for it himself. Prior to be treated by Dr. R—, the case had been in St. Luke's Hospital for six months, but there received little or no benefit.

SYP. HYPOPHOS. CO., FELLOWS

CONTAINS

The Essential Elements of the Animal Organization—
Potash and Lime ;

The Oxidizing Elements—Iron and Manganese ;

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And the Vitalizing Constituent—Phosphorus ; the whole
combined in the form of a Syrup, with a slight
alkaline reaction.

It differs in its effects from all Analogous Preparations :
and it possesses the important properties of being
pleasant to the taste, easily borne by the stomach,
and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the
treatment of Pulmonary Tuberculosis, Chronic Bron-
chitis, and other affections of the respiratory organs.
It has also been employed with much success in
various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant,
tonic and nutritive properties, by means of which the
energy of the system is recruited.

Its Action is Prompt : It stimulates the appetite and the
digestion ; it promotes assimilation, and it enters
directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy
and removes depression and melancholy ; *hence the pre-
paration is of great value in the treatment of nervous and
mental affections.* From the fact, also, that it exerts a double
tonic influence, and induces a healthy flow of secretions,
its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr.
Hypophos. FELLOWS" As a further precaution it is
advisable to order in original bottles.

FOR SALE BY ALL DRUGGISTS.

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WHOLESALE AGENTS

MONTREAL

The general symptoms presenting were: Loss of Appetite; disagreeable grawing, and at times, fullness in the stomach; tenderness at the epigastrium, slightly influenced by eating; almost constant prominence of the epigastrium from distension by decomposing gases. The patient has occasional attacks of nausea and vomiting, occurring most frequently on arising, consisting of gray mucus raised after great retching; constant thirst; often great burning at the pit of the stomach; bowels constipated; urine highly colored. There was a constant feeling of mental depression, and sleeplessness, with occasional attacks of vertigo. The patient also had a follicular pharyngitis of an aggravated type. He was very thin, muscles relaxed, and the skin dry. On entering the hospital he was so weak that he had to be carried from the ambulance on a litter.

His secretions were regulated and he was put on an absolute bovine diet, half a teaspoonful every hour in lime water and peptonized milk. Once in 24 hours he was rubbed thoroughly with olive oil. The follicular pharyngitis was first treated by cleansing the surface with bovine Thiersh, followed by spraying the bovine pure, this being employed every three hours.

On the 10th, the patient felt stronger, was sleeping well, and was not so depressed mentally, burning in the pit of the stomach greatly reduced, no vomiting, but still present nausea and constant thirst. The bovine was now increased to a tablespoonful every two hours, and the treatment of the pharyngitis reduced to twice in 24 hours.

On the 20th, the patient was up and about, feeling much stronger, having gained five pounds in weight. The constant thirst had disappeared as well as the nausea. He also craved some general diet. He was, however, perfectly nourished and did not complain of being hungry, only thought he would like to try and eat something. This was not as yet allowed.

On the 22nd, however, his condition still being on the gain, he was allowed a little rare beef well chopped up, and a piece of toast. This he ate with relish, and retained it without any discomfort. Treatment continued.

On the 23rd, the follicular pharyngitis had entirely disappeared. He was allowed some rare chopped beef, a little rice and toast.

On the 25th he took a long walk and on returning, said he felt splendidly.

On the 28th, he was discharged, cured, with the advice to continue the bovine and to report for examination at the end of a week.

The action of the bovine on this class of cases is as in all others. First, it gives the alimentary tract absolute rest, and at the same time supplies perfect nutrition, containing as it does every element in the proper proportion to sustain the human organism.

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THE CANADA LANCET

VOL. XXXIV. TORONTO, DECEMBER, 1900.

No. 4.

ORIGINAL ARTICLES.

THE UNOFFICIAL GYNAECOLOGICAL TREATMENT OF THE INSANE IN BRITISH COLUMBIA.*

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My first attempt in gynaecological treatment of the insane was made on Jan. 5th, 1898, with such remarkable results that I have lost no opportunity of investigation in this direction. Although the work has not yielded the almost incredible results that were evinced by my first few cases, they have been fairly satisfactory, and sufficiently encouraging to justify the effort and to stimulate a more systematic and thorough investigation into the relations which exist between pathological conditions of the pelvic organs and abnormal psychic phenomena.

My examinations comprise 98 cases, and my operations 33. Of these, 42 examinations and 24 operations were in British Columbia and to these I shall confine my remarks.

None of these patients presented indications of assymetry of features, nor high arched palate, irregular ears, defects of speech, deafness, chorea, strabismus, *i.e.*, waverings of eyes or twitching of facial muscles. In the cases operated upon no hereditary taint was obtainable.

The preliminary examination was at first conducted under an anaesthetic, but latterly this was as much as possible dispensed with, using it only for violent cases. It has been my practice to open the abdomen only when external examination reveals disease, but a more extended experience leads me to consider intra-abdominal examination an essential part if there be indications pointing in that direction with an absence of determinable disease elsewhere. With modern methods such an examination should have no mortality and but a few weeks confinement, and surely a disease that would remove a patient from friends and society perhaps for life justifies such careful investigation.

* Presented at the meeting of the British Columbia Medical Association held at Vancouver, Aug. 9th, 1900.

No.	Mental Condition.	History of Physical Disease.	Condition found upon Physical Examination.
1	Three years insane, at times violent mania.	Absent.	Cystic, prolapsed and adherent ovaries.
2	Melancholia for one and half years.	Severe back ache for six months.	Rup. perineum, varicocele of pelvic plexus,
3	Religious delusions for three years also suicidal mania.	Ovaritis fifteen years ago.	Retroversion with dense adhesions.
6	Melancholia for two months. Religious mania one month.	Pelvic pain for four years.	Adherent appendages; cystic ovaries.
8	Hystero-mania recurrent, one attack lasting six weeks.	"Blood poisoning" following miscarriage.	Perineal rupture, tubo-ovarian adhesion.
11	Melancholia for one month.	Absent.	Perineal rupture, enlarged uterus with adhesions.
13	Pre-menstrual mania with delusions fifteen months.	Absent.	Pelvic varicocele, adherent and cirrhotic ovaries.
14	Delusions for three weeks.	Pain in back and side since last child.	Retroversion with adhesions; salpingitis.
16	Mania and delusions with melancholia one year.	Caught cold after miscarriage.	Rup. perineum, prolapsed ovary.
17	Dementia of six year's duration.	Absent.	Cirrhotic ovaries with adhesions.
19	Mania with delusions two years.	Absent.	Retroversion with adhesions; ruptured cervix.
21	Melancholia ten years duration.	Specific vaginitis.	Cystic ovary; retroversion with adhesions.
24	Melancholia, suicidal mania two and half years.	Absent.	Rup. cervix, retroversion, adhesions, cystic ovary.
26	Melancholia with delusions and suicidal mania three weeks.	Appendicitis.	Par ovarian cyst; salpingitic adhesions.
28	Melancholia with delusions two years.	Pelvic discomfort for years.	Rup. perineum, salpingitic adhesions.
63	Delusions with mania, four years.	Absent.	Rup. perineum and cervix; retroversion with adhesions, piles.
64	Melancholia and delusions four years.	Absent.	Adhesion of clitoris, retroversion, varicocele, fungoids.
65	Delusions, menstrual mania six years.	Dysmenorrhoea and pelvic pain.	Retroversion, cystic, inflamed and adherent appendages.
67	Mania with melancholia, three months.	Childbirth.	Rup. cervix.
68	Delusions and mania, three years.	Absent.	Rup. cervix; Ovarian cyst.
69	Delusions occurring occasionally.	Pelvic pain, hemorrhage.	Enlarged uterus, endometritis.
77	Intermittent melancholia.	Dysmenorrhoea.	Enlarged, prolapsed and adherent ovary. Salpingitic adhesions.
78	Mental confusion, inability to attend to household duties, melancholia intermittently.	Pelvic pain for years.	Retroversion with adhesions, varicocele, cystic and adherent ovary.
73	Religious mania and delusions two years.	Absent.	Cervical polypus, retroversion, cystic ovaries.

No.	Treatment.	Results.	
		Physical.	Mental.
1	Double salpingo-oophorectomy.	Perfect result. Gain of thirty-five pounds in weight.	Recovered within 16 days.
2	Curettage and double salpingo-oophorectomy.	Normal.	Improved.
3	Removal of right appendage. Freeing of adhesions. Ventrofixation.	Normal.	Recovered within 21 days.
6	Double salpingo-oophorectomy.	Recovered from operation. Died from meningitis nine weeks after.	Unimproved.
8	Amp. cervix. Removal of cystic ovary and ventrofixation.	Normal.	Recovered.
11	Vaginal ovariectomy.	Died.	
13	Double salpingo-oophorectomy.	Normal.	Unimproved.
14	Curetment. Removed right and resected left ovary.	Normal.	Recovered.
16	Amp. cervix. Double salpingo-oophorectomy.	Normal.	Unimproved.
18	Curetment. Double salpingo-oophorectomy.	Suppuration in abdominal wound.	Improved for a time. Relapsed.
19	Amp. cervix; curetment; removed right appendage and left tube.	Normal.	Unimproved.
21	Double ovariectomy.	Normal.	Recovered.
24	Curetment; trachelorrhaphy. double salpingo-oophorectomy.	Normal.	Unimproved.
26	Curetment, double salpingo-oophorectomy.	Normal.	Recovered.
28	Removal of appendages.	Normal.	Unimproved.
63	Amp. cervix; ventrofixation.	Normal.	Unimproved.
64	Curetment, ligation of veins, ventrofixation.	Normal.	Unimproved.
65	Curetment, removed right ovary and left appendage.	Normal.	Recovered.
67	Curetment, trachelorrhaphy.	Normal.	Slight improvement.
68	Removed one ovary, resected other.	Normal.	Slight improvement.
69	Vaginal hysterectomy.	Normal.	Recovered.
77	Removed right appendage, resected left ovary.	Normal.	Recovered.
78	Removed right appendage, resected left ovary, ventrofixation.	Normal.	Improving.
73	Curetment; removal polypus, resect. ovaries, ventrofixation.	Normal.	Unimproved.

RESULTS. Out of forty-two cases examined in British Columbia but two presented normal pelvic organs, these two were unmarried. Of the twenty-four placed under treatment all but two had been married. Of the married ones all but three had borne children, and these three had salpingitic adhesions, giving evidence of former pelvic inflammation.

Of the different conditions found I report only such as pathological, that in the opinion of the ablest authorities, are capable of producing in those whose mental powers are intact, local pain, discomfort, or general systematic disturbance. Perineal laceration was present in five cases, cervical laceration in six cases. Retroversion with adhesions in seven and simple retroversion in three cases. Adhesions of the clitoris were noted but once, while salpingitic and ovarian adhesions were found in ten cases. Cystic ovaries varying from slight enlargement to that of a navel orange were found in eight cases, and par-ovarian cyst in one case. Varicocele of the broad ligament plexus was found in four cases, and uterine fungoids in one. By far the greatest number of any class were those of the inflammatory class. Next in order appears cystic disease of the ovaries.

Of the mental results I can report eight cured and two more all but cured, two very much improved, three slightly improved, one improving, in fact well, but too early to report. I have the satisfaction that, so far as I know, none have been rendered any worse by the treatment. Of the results physically all had normal convalescence from the operation but two, one had suppuration of the wound, and one died eleven days after the operation, the post-mortem showing acute cerebral congestion with a slight focus of suppuration at seat of ligature. One case died of basal meningitis nine weeks after the operation wound had healed and nurse discharged at the usual period.

With a gradually increasing knowledge of pelvic pathology, we realize that the sacrifice of normal tissue is by no means necessary. With modern methods resection of cystic ovaries with retention of the healthy part is preferred to the sacrifice of the organ as was formerly practised. It is very rarely that the whole of both ovaries is removed. Nothing is more certain that the removal of a healthy organs contributes in no possible manner to a restoration of the mental health. The pelvis in these cases must be subjected to the same treatment that would be given a patient whose mental condition is not in question. The disease and that only is to occupy the attention of the operator.

The post-operative treatment of these cases differs little from that of ordinary abdominal cases. Occasionally one requires to be bound to the bed, but in the vast majority of cases the nurse can control the patient's actions with but little trouble. The selection of the nurse is a matter of no little importance. She should be strong in mind and body and possess sufficient tact to enable her to cope with, conquer and dispel the slightest indication to former abnormal habits of thought or expression. An additional nurse is required to take alternate duty.

These patients as a rule are anaemic. As soon as the digestive system is in proper condition they are placed upon an easily assimilated ferruginous tonic. Regular evacuations and blood rich in hemoglobin are the best eliminators of ptomaines with which the tissues have been saturated during the years of impaired function and systematic depression.

The old proverb *mens sana in corpore sano*, has long been recognized as standard of normal health. But how close is the relation be-

tween the Mens and the Corpus it may be that few of us have even yet dreamed. Certain it is that as investigations into the physical realm are continued, startling facts are being constantly brought to light concerning the very intimate relation between the psychic and the physical. Is it not more than probable that we are just here treading the borderlands of a new world. Surely what we already know, though dimly, of the correspondence between the mental and the physical is sufficient to convince us that there are yet great discoveries to be made along that line. And let us not overlook the fact that to the active physician belongs the duty of jealous investigation in that direction. In fact he must be to the forefront in the scientific investigation of these opening problems or he will become the butt of ridicule for those whom he, in his complacent self-sufficiency, is inclined to designate as quacks and religious cranks, and for their increasing number of sympathizers among thoughtful people.

Prof. Foster tells us that "changes in what we call the body bring about changes in what we call the mind." Demonstration is unnecessary to show that the sexual system, while in direct sympathetic connection with other organs, has also a unique connection with the physical, nor to trace the relationship between a given psychological state and that of local pelvic congestion, and the channel through which this is made possible is the same channel through which a local pelvic irritation may produce abnormal cerebral activity with disordered cortical functions giving rise to and indicated by abnormal mentality. These influences from peripheral irritations of the sexual organs may at times be inhibited by a strong mentality, but they may, if severe and persistent, eventually overcome the strongest subjective effort. Given a certain environment of a strongly sexual character in a robust person, certain alterations of form and function follow in response to such stimuli in spite of efforts of the will to the contrary. To obviate the result the environment, or stimuli, which may be purely physical, must be removed. Now if such stimuli, not necessarily objective, are sufficient to produce organic change in defiance to the will, so may a local pelvic irritation or stimulus, acting upon the higher nervous centres cause abnormal physical action, also in defiance to will power, to cease only when the abnormal environment or peripheral irritation is removed. This is illustrated in the experience of my first case, who after her recovery gave me a somewhat detailed history of parts of her insane life, stating that she experienced and recognized within herself a force totally distinct from herself which compelled her to speak and act directly against her better judgment. This force, formerly called Satanic, is but the unconquerable abnormal physical reflex from a sensitive and diseased periphery, and the patient vacillates between reason and insanity as the force is subservient to and dominated by the will or becomes the ruling power in the organism.

With this conception of insanity comes a new responsibility, especially to those who had formerly considered its development the limits of their medical jurisdiction. We must now consider insanity but the indication of a serious physical lesion, demanding the utmost care and skill on the part of the attendant to discover, to determine and treat such

lesion. At times such disease may be easily found, but frequently and unfortunately it will elude his grasp. To consign to the asylum without giving the patient the benefit of modern therapeutics is unjust to the patient and cruel to the friends. To be sick may be unfortunate, but it is not necessarily a disgrace, neither should the occurrence of insanity in one member of the family be the instance of casting reflection, but so long as such erroneous conception exists in the public mind we cannot be too careful in this matter. To those in whose family this affliction has fallen, and who live in perpetual dread lest through some mysterious visitation that they also may become victims, we can bring hope, assuring them that the conception of "mental disease" as distinct from physical lesion has passed away, that insanity is not the result of some vague demoniacal influence, nor the indication of disfavor upon the part of an offended Deity, but the direct result of physical disease, and only follows where physical degeneracy leads. And to our female patients who, under the burden of life's duties and oppressed by its sorrows, harassed by the customs of society and irritated by disease, whose mentality at times indicates the result of constant peripheral irritation, whose reflexes refuse to submit to the subjective guidance and become temporarily dominant, and who reasonably look to us for relief, what shall we say? Is asylum life with its unpleasant associations, its stone walls, iron bars and uniformed keepers, the atmosphere calculated to restore jaded nerves, to recuperate a wearied body and remove local disease. On the contrary, admitting the utmost kindness on the part of those in charge, is not such an environment comparatively as irritating to a sensitive nature as her local disease is abnormal? Only after all methods have been exhausted, and not until then, should we permit our patients to be removed to the care of the state. Let us look at this matter fairly and if necessary in the concrete. In view of what has been accomplished in the modern treatment of insanity, and in view of the true conception of insanity, how would you or I act with regard to those who are nearest to us in ties of affection? Let us consider such symptoms as formerly but fingerposts pointing to the asylum as indications for the necessity of closer examination and more skilful treatment, remembering that every case committed is a painful admission upon our part of inability to locate or remove the physical disease. If such care were habitually exercised, the asylum commitments would be appreciably less.

However satisfactory it may be to report recovery after the removal of physical disease, it is not to be compared to that experienced when we also have restoration of the mental. To remove physical disease and at the same time to minister to "minds deceased" is the highest ideal of surgery.

It has been urged that disease of the genital organs in women cannot be a prolific cause of insanity, and the reason offered for the statement is because the ratio between the male and female insane is about equal. Have the causes of insanity among the males been determined, and has it ever been shown that disease of these parts is not a factor in its production? Are not these organs undistinguishable in their early embryological developments? Are not the nerve and blood supply analagous?

Are not the ravages of disease in the parts recognized by well known lesions, and may there not yet be much to be learned in this particular field? Again, who are the men who largely recruit the asylum ranks? Are they not the young men who in the period of functional activity have excelled in abuse of their sexual system? We shut our eyes to this too often. The excessive waste of highly vitalized fluids, with its accompanying exhaustion, the inflammatory conditions, acute and chronic, which are the product of the gonococcus, to say nothing of the grosser pathological results—abscesses, strictures, etc. Must nature bear this outrage without revenge? Our asylum reports state self-abuse as a cause of insanity in a certain proportion of cases. When an elongated and constricted peepce, adhesions and retention secretions are a recognized cause of nervous disturbances in male children, it is but reasonable to suppose that undue irritation and exhaustion may cause the most grave nervous disturbances in adults, but when we have added to this condition one of specific infection, with all its train of results, it is within the limits of the probable that one cause of insanity in the male may be analogous to that in the female, and if the cause, then it follows that the treatment should be as direct and radical.

Lest any careless reader or superficial observer, whose thoughts follow but beaten tracks, and whose memory hovers over "mutilating operations upon the insane," "wholesale mutilation of helpless lunatics," and other absurd phrases, might conclude that it is within the meaning of this paper that the cause of insanity among women is found alone in diseased pelvic organs, or that surgical measures are advocated as a panacea for mental abnormality we wish to emphasize that no such erroneous conception exists either upon the part of the writer or in the minds of those who have appeared before the public as workers in this department. But one thing we do believe and shall advocate so long as there are additional worlds of conservatism to conquer: That the principles of surgery and humanity unite in demanding that the insane receive at least the measures of consideration and treatment that their diseases call for; that these hapless sufferers from pelvic diseases have extended to them the benefits of modern treatment; and that our insane mothers, sisters and wives receive treatment equally skilful to that given in daily practice by hundreds of our educated physicians. If this be done a small per cent. of the asylum population may be sent to their homes, households united, family ties restored, and given "beauty for ashes, the oil of joy for mourning, and the garment of praise for the spirit of heaviness." This is no idle dream, no strain of imagination, but a fact in our city. What has been done here can be repeated in any city in Canada. It is an opportune moment, in view of the evidence submitted, for the profession to unite in this new crusade and extend to these unfortunate invalids the measures of mercy that an enlightened sentiment desires and the spirit of justice demands.

In order not to prolong this paper I will give a brief history of but a few of the cases.

Case 1.—Mrs. —, a former patient, aged 35, of excellent family history, no hereditary taint, had been committed to the Provincial Asylum

during my absence in Europe. She had enjoyed excellent health until, after attending to her household duties and acting as nurse to her two children she became considerably debilitated. This, with the shock of the younger child's sudden death, precipitate intermittent melancholia lasting eight months. Symptoms of pronounced insanity with suicidal tendency developed. After a month's treatment under the care of a nurse she was committed to the provincial hospital for the insane, April 1st, 1895, where she remained until January 3rd, 1898. During this period she was at times violent, would attempt to scratch and bite her attendants, exhibited a most obstinate disposition, was considered by the late matron as one of the worst cases, and by the authorities as hopeless. No encouragement was given as to her recovery. The patient was placed under chloroform and a pelvic examination made. The right ligament was thickened, left ovary prolapsed uterus fixed, and perineum partially ruptured. Upon this data I recommended operative measures.

Operation. Right ovary was found cystic with tubal adhesions, left ovary adherent in cul-de-sac, fimbriated extremity closed. The appendages were removed, uterus also curetted. The operation was brief and practically bloodless; post-operative history normal; stitches removed on the twelfth day. The mental condition remained unchanged for some days. She persisted in sitting up in bed, tearing the bedclothes, and endeavouring to bite and scratch the nurses. It was necessary to tie her hands on either side of the bed, and place a heavy bandage over the lower part of the body. Upon the fourteenth day after the operation she became calm and recognized her mother. On the following day she conversed a little and appeared to appreciate the kindness of her nurses. Upon the seventeenth day the patient seemed more rational, did a little sewing, and took an interest in her surroundings. The following day I allowed her to see her little daughter, now a bright girl of eleven years, whom she had not seen since entering the asylum. The meeting was one not soon to be forgotten; it was one of those periods in a physician's life when his remuneration is beyond computation, an experience that lives. The patient acted and spoke as only a reasonable mother could. Day after day, as the physical strength increased, the mind became capable of more extended effort. Thirty-five days after the operation the nurse accompanied the patient to her home and remained with her a few days; and to-day the patient is managing her own household and attending to her social duties with all the reason and energy of her former self.

Case 2.—Mrs. C., aged 57; married; several children; no history of inflammatory action; family history excellent; experienced some financial troubles; for several years has suffered from pain in back and pelvis, and underwent treatment without relief. Melancholia developed, when she was committed to the asylum where she remained a year. Examination made under anaesthesia showed lacerated perineum laxity of the vaginal walls, but nothing else. Upon this examination I did not recommend operation. After conference with friends who desired nothing to be left undone, I concluded to explore the abdomen, and found large varicocele of both broad ligaments with calcareous deposits and cystic degeneration of the pelvic peritoneum. Appendages were removed with as much of broad ligament as possible.

Post-operative history normal, physical condition much improved, mental condition considerably better, so much so that she is managed at home, and takes an interest in domestic affairs. Does considerably sewing for grandchildren and, in fact, is much better than we expected.

Case 3.—Mrs. R., aged 52; no children. Had an attack of ovaritis fifteen years ago. Examination showed retroversion and general pelvic adhesions, insanity of a suicidal and religious type. She was in the asylum for three years. Operation, October 8th, showed adhesions of the clitoris, retention of the smegma on account of dense adhesions. Replaced womb. Insanity was completely cured and physical condition improved.

Case 14.—Mrs. D., aged 27, one child six years old, not pregnant since, convalescence from confinement slow, has not been strong since, had delusions of her husband trying to poison her; would frequently wander from home and be found in houses of acquaintances in different parts of the city. Examination without anaesthesia showed retroversion with adhesions, condition of appendages could not be made out. Operation; right ovary contained cyst the size of a walnut, was removed with its tube, also left tube removed; adhesions broken up. Convalescence normal, left hospital upon 18th day. For a week after returning to her home had occasional desire to get up and go out without her clothes on but since one month from operation has been perfectly normal mentally with the exception of two occasions for a few days previous to menstruation when she had a return of delusions.

Case 24.—Minn H., age 18. For several months had acted in an excitable and strange manner, worse during menstruation. For three weeks before I saw her had manifested decided mania at times suicidal.

Previous history. Had an attack of typhoid fever with inflammation of the bowels four years ago, complained of pain in right side increased by walking. Had leucorrhoea.

Examination; no hymen; retroversion with adhesions, right ovary enlarged, general salpingitic adhesions, profuse leucorrhoea.

Operative treatment, March 7th. Removed appendages with exception of part of right ovary, small par-ovarian cyst, also removed elongated and congested appendix.

Result: better for two days after operation, worse again but improved and at the end of four weeks was perfectly sound physically and mentally.

Case 65.—Mrs. —, never pregnant. Kindly referred by Dr. McNaughton of Vancouver. For six years complained of pain in side. For several years she suffered from mental confusion previous to and during menstruation. Became worse would throw away her clothing, would scream loudly, threaten suicide, etc. She had passed through the usual ordeal of treatment for misplacement, etc., etc. Examination showed masses upon both sides of the uterus with dense adhesions. Operation. Right ovary enlarged, cystic and containing mass of hard blood clot size of marble; left ovary enlarged, stroma destroyed, tubes disorganized by inflammation, universal adhesions. Convalescence normal.

Case 77.—Mrs. —, aged 27, two children. For fifteen years suff-

ered from pain in right side, worse the week following menstruation. Pain frequently excruciating. Local treatment gave relief only temporarily. For two years suffered from intermittent melancholia.

Examination showed enlarged, prolapsed and inflamed ovary with adhesions.

Operation. Removal of right appendage and restriction of left ovary.

Perfect recovery, physically and mentally.

Case 78.—Mrs. —, aged 33, two children. Complained of "womb trouble," for several years with severe back and headache. For last few years she would become mentally confused, would forget herself while engaged in domestic duties, and would be unable to continue the household work. Coupled with this were periods of melancholia.

Examination showed ruptured perineum and retroversion with adhesions.

Operation. Right ovary enlarged and cystic removed; left ovary cystic, resected; varicocele of veins ligated in two places and ventrofixation. Is progressing favourably but too recent to report.

These last two might fitly be called borderland cases, as they could hardly be included as coming wholly under the classifications suggested. Nevertheless they are evidently examples of the class from which the demented ranks are not unfrequently recruited and who require our most careful consideration.

Conclusions,—(1) That the prevalence of diseases of the pelvic organs, and the absence of any other determinable organic disease in many patients who manifest psychic abnormality, coupled with the fact that in a by no means small percentage of cases the removal of the pelvic disease is followed by a rapid return to the normal mental condition, justly lead us to the conclusion that between pelvic diseases and mental aberration there exists some correlation, but as to its exact definition we cannot yet speak.

(2) That in all cases of mental abnormality in both sexes which develop from the advent of puberty onwards, the condition of the pelvic organs with their functions should be made a matter of searching enquiry.

(3) That whenever possible before commitment to the Hospital for the Insane, the pelvic organs should be examined and if any abnormal conditions be found such condition should receive appropriate treatment.

(4) That gynaecological treatment should be recognized as a most important part of Asylum therapeutics.

REFLECTIONS.

It has been stated that man is a complexity of delicately poised reflexes, but it is more than this since we have the power of the origination and direction of action and to a limited extent that of inhibiting reflex action. This something which controls we call the Ego. To the extent that the Ego directs the activities and controls the reflexes to that extent is the ideal human life exhibited. The ideal life as distinct from that of the mere animal is exhibited only when the activities of the organism are

less the result of reflex action than those resulting from the direction and domination of the Ego. So long as the organic structure is intact, so long as the system is free from disease, so long are the reflexes normal, but with a diseased periphery, nerve tract or centre, we expect abnormal reflex results. When this are is confined to those parts of the body which are not intimately concerned in psychic phenomena, we have but abnormal physical reflex, as evinced in the exaggerated knee jerk of lateral sclerosis but if the reflex arc includes the basal ganglia whose function is to exhibit psychic reflex, and if there be organic disease at any point in the continuity of the arc then we must expect abnormal psychic reflex. The exaggerated knee jerk we call a symptom of physical disease, but we call the abnormal psychic result insanity while in reality it also is a symptom of physical disease, differing from the former only as the functions of the parts diseased are different.

As the Ego can realize that exaggeration or absence of the knee reflex is abnormal so also it is capable to a limited extent of recognizing abnormal psychic reflex.

In the early stages of mental disease is that of hallucination in which the patient is still conscious of the unreality of the psychic reflex, the second delusions in which the Ego has been limited and clouded, but yet exerts a measure of mental control, the third definite insanity in which the Ego has been completely subjugated by the intensity of abnormal reflexes. Insanity is the psychic sum of physical abnormalities. The focus of irritation may be in the blood, in any of the large ganglia or at the periphery of the sympathetic system in any of the large cavities or in fact wherever nervous tissue is found, but is very rarely found in the cause of sensory nerves.

1. To recapitulate we may conclude that insanity exists when the Ego is dominated and controlled by the influences from a diseased periphery, nerve tract or centre.

2. Since disease is subject to variation of intensity, a patient may oscillate between sanity and insanity as the Ego dominates and controls the organism inhibiting abnormal psychic reflex or is dominated and controlled by the intensity of such reflexes.

3. Since the intensity or degree of the abnormal psychic action is the measure of the sum of the physical abnormalities, the removal of a small part of the physical disease might result in the restoration of the balance of power to such an organism and diminish if not remove the abnormal psychic phenomena.

A CASE OF JACKSONIAN EPILEPSY WITH OPERATION.

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The history of the case which I have the honour to show this evening is as follows:—

R. W., farmer, æt 20, entered my private hospital on Dec. 16, 1898.

Family history.—Father and mother alive and well, aged 67 and 65 respectively. Has five brothers and two sisters living, all of whom are nervous, but their general health is fairly good. Patient says that

all his brothers will laugh till they cry, and that he has seen his sister laugh until she would shudder and scream. Two great uncles died of tuberculosis—no insanity nor other nervous disease in family.

Previous history.—Patient had ordinary diseases of childhood, and at three years of age a severe attack of congestion of the lungs. No scarlet fever. At his confinement the labour was severe, and it was feared his mother would die. Previous to his birth his mother helped to take care of an epileptic patient, restraining him in his attacks.

Present illness.—When about five years of age he was struck on the head by a branch falling from a tree. He is uncertain on what part exactly of the head he was struck, but it was near the vertex anteriorly. It bled furiously for a time but was soon stopped. He was dazed from the blow but did not lose consciousness, and he is not aware of any ill effects from it.

Between the age of five and seven years patient first experienced symptoms of his present trouble. He then felt a numbness through the muscles of the left forearm at times only, but especially when the arm was bathed. Spasms in the arm were gradually added to this sensation, and these attacks would come on about once a week. He suffered from very severe headaches and cramps in the stomach until about ten years of age, and since this both headache and cramps ceased until six months ago when he had a severe headache, from which he said he thought he would "go crazy." For the past six months, headaches have been slight and infrequent. He never vomited during any of these headaches, nor at any time. From the age of ten until two years ago, the attacks occurred about once a week, but he would sometimes have a month entirely free from them. He says from the time he was seven or eight until two years ago the attacks would begin by a rotatory sensation in left arm, and that a tonic spasm would follow. Generally, attack was confined to left arm, but at times it would extend to head, turning it to the left, the left leg also would become involved and then right arm would be affected. Consciousness was not at any time lost. He found that various methods would check or prevent an attack, such as extending the arm if it were flexed, or seizing left hand with his right around the fingers. About two and a half years since, he worked very hard for three months for an examination at school. He then returned to farm work and he soon noticed his attacks becoming more frequent, but of much the same intensity, or perhaps they were less severe for a time. They increased steadily in frequency until about ten weeks ago, he having had as many as fifty in a single day.

Physical examination shows a well developed young man of good intelligence. He is usually bright, except when his attacks have been numerous. In regard to his education, he says he passed the examination for a second class certificate when fifteen, and only failed in one subject on trying for a first after three months' preparation. His muscular development is everywhere good, and he has been very fond of football and out-door sports. He says he never had an attack while playing football nor while driving. Patient had an attack during the examination. It began by loss of power in left arm followed in about

ten seconds by a tonic spasm in this arm and turning head and eyes to the left. The spasm in the arm then became clonic and ceased, the whole attack lasting about thirty seconds. There was no change in pulse or pupils and no disturbance of consciousness, the patient being able to discuss each new phase of the attack as it occurred. There is no disturbance of any form of sensibility in any part of body. Dynamometer gives R. 105 L. 90, triceps reflex more marked on left side. No muscular inco-ordination in arms. On standing with feet together and eyes closed patient inclines to fall backward and to the left. He never frothed at mouth nor passed urine during the attack. The aura he describes always is felt as a revolving sensation which begins invariably at one spot on the postero-external surface of the left fore arm about two inches below the elbow. Knee jerks equal and normal. Pupils equal and react to light and accommodation; no optic neuritis; urine normal; eye movements good; fields of vision show slight concentric contraction, more marked in left; other organs healthy.

Dec. 30 — Patient asked me, on coming into his room to-day if I would like to see an attack, as he felt one was coming on by the sensation in his arm. It began as usual in the left arm, then a slight tonic spasm of muscles of legs, and the right arm was adducted and wrist flexed. He says if he had compressed left wrist with his right hand the attack would have been limited to the left arm. His Romberg symptom has disappeared. His attacks have varied from three to thirty in twenty-four hours.

Patient tells me to-day that when a child he remembers running to his mother, saying his left fore arm had a revolving sensation in it just below the elbow. This sensation was at once followed by rotation of the wrist, and then arm would drop to side and turn palm backwards, the arm stiffening at first, and then jerking. This revolving sensation would go downwards from the elbow to the hand, and then ascend to the shoulder, and with this latter, the whole left arm would be convulsed and the head turned towards the left side. The arm sometimes would be limp after an attack. He never had any giddiness during any attacks. The patient was shown at the Toronto Clinical Society on Jan. 11.

Jan. 19th. Patient says he has two tender spots, one on either side of the vertex in the middle third of the parietal region, and about equidistant from the median line. They are very limited in extent and are about the size of a finger tip. Patient has had about 30 spasms in the past 24 hours, after some of which he was greatly exhausted. There was no loss of muscular power in any of the extremities, nor any disturbance of external sensibility. On bringing finger tips together, eyes closed, there is a slight difficulty in approximation, about half inch of difference. He has also a slight difficulty in touching end of nose with finger tips, eyes closed; with left fore-finger, reaching at first from half to one inch of desired point. There is also slight difficulty in doing same with right fore-finger, but not nearly so marked. Idio-muscular contractions on tapping muscles of left arm very marked present, also in right, but not so distinct, but triceps and wrist reflexes are more marked in left arm. A slight erythema follows a stroke of percussion hammer,

lasting about thirty seconds. A tap over left biceps muscle induced a distinct wheal. Patient says that tapping on the upper part of the fore-arm brought on a slight attack characterized by slight clonic spasms of arm and fore-arm and lasting about five seconds. He said when these ceased the attack was still "working in his head," but no movements were visible. Epigastric reflexes active and equal. Knee jerks slightly increased and equal. No ankle clonus nor plantar reflex on either foot. Pupils active and equal. Ophthalmoscope shows engorgement of veins, but I could detect no papillitis. No disturbance of smell or taste. Tongue protruded in centre.

As patient's attacks were growing more severe and more frequent in spite of all treatment he decided to have an operation. The operation was performed by Dr. Grasett, assisted by Dr. Peters and Dr. Crawford Seadding, who gave the anæsthetic. A horse-shoe flap about four inches in diameter was raised over the right parietal region. The skull was then trephined, the centre of the trephine (the diameter of which was $\frac{7}{8}$ inch) being placed two inches from the median line, and $\frac{1}{4}$ of an inch in front of the five of the fissure of Rolando. On removal of button the dura appeared perfectly healthy with two large veins, running across its upper and lower limits, respectively. There was no bulging or any visible pulsation. I then applied an electric current to the dura with very satisfactory results, producing distinct movements in left fore-arm and hand. The dura was then opened and the pia bathed with antiseptic solution. The convolutions appeared quite normal and I applied electricity to the pia with much the same result as was obtained outside the dura. A small opening was then made in the pia and a probe inserted for one and a half inches without abnormal resistance. As nothing abnormal had been found a short consultation as to what had best be done was held. I advocated excision of the centre and this Dr. Grasett did, excising about one half inch of the cortex from the centre of the trephine opening. The wound was then closed, no stitches being put in the membranes. The bone was not replaced. A drainage tube was passed through an opening made in the flap. The patient did well, recovering from the operation without a bad symptom.

In regard to the variety of electricity used I may say I employed a mild current from a faradic battery with a slow vibrator. The insulated handle, which was provided with an interrupter, was fitted with two electrodes the points of which were 5 m.m. apart. The slow vibrator I found very satisfactory. As to the distance the electrodes were apart, I found 5 m.m. was most suitable, a better result being obtained than when these were closer together. The results of the application of the current were practically the same when applied to the dura as to the pia. When electrodes were applied to the centre of the trephine opening, marked contractions of the extensors of the left fore-arm were produced, whilst from the parts of the opening adjacent to the centre, various movements were produced in the thumb and all the fingers, the long flexor of the fingers acting very distinctly. No movement took place in the muscles above the elbow, nor in any other part of the body, the muscles of the fore-arm and hand alone being stimulated by the electricity. On account

of the small size of the trephine opening ($\frac{1}{8}$ inch), it was impossible to stimulate any further muscles. We had, however, been fortunate in exposing the exact centre we were seeking, otherwise the small size of the trephine might have proved an objection. A larger trephine might have been useful to delineate the fissures, it being impossible to do this at all accurately with the one employed, had it been necessary. As to the immediate results of the operation, which was concluded at 1.15 p.m., the first noticeable one on recovery from the anæsthetic was an entire inability to use the hand or fingers, the patient being able to exert voluntary power only in the arm muscles. At 3.40 p.m. of the same day (Jan. 20) patient had a spasm of the left hand and fore-arm muscles which, though not severe, was decided. At 4.30 p.m. patient said attack was coming on, and a slight tremor of muscles of fore arm was visible. At 6, 7.15 and 9 p.m. he had distinct attacks in paralyzed muscles. Jan. 21st, no disturbance of sensibility to touch, pain, temperature or location in paralyzed parts. He recognizes fully different position in which fore-arm, hand, thumb or fingers may be placed. He now has slight extension of wrist and slight power of rotation, but no flexion, nor can he perform any movements with thumb or fingers, the paralysis being complete. He answers questions without hesitation. At 2.20 p.m. he had a spasm in left hand and arm at the end of which the thumb jerked violently, attack lasting about five seconds. At 5.25 spasm, left wrist being strongly fixed. No external evidence of spasm higher than left fore-arm.

Jan. 22nd at 3.30 p.m. Patient had spasm of left forearm and hand which was clonic in its nature, lasting about ten seconds. Movements were almost confined to paralyzed muscles. Voluntary rotation of forearm can now be accomplished by the patient, also feeble extension of wrist. Shoulder movements good as well as flexion and extension of elbow. Patient has had seven slight seizures in past 24 hours.

Jan. 23rd, 10 a.m. Slight attack in left hand, at first tonic and then clonic, lasting about ten seconds and affecting the fingers almost entirely.

Jan. 24th. He tells me that yesterday, when he was about to yawn the fingers extended involuntarily although there was no evidence of an attack at the time. Paralysis still absolute in hand and fingers. Extensions of wrist stronger but there is still no flexion. Sensibility of all kinds is decidedly acute but there is no hyperæsthesia.

Jan. 25th. Patient says attacks have never begun since the operation in spot in forearm where they always previously commenced. For past three days the attacks have been slighter and less frequent varying in number from two to five each day.

Feb. 3rd. First power returned in long flexors of left forearm to-day. If one's fingers are placed in his hand he can grasp them. Extensors of wrist stronger and there is now some flexion of the wrist. No disturbance of sensibility. In regard to muscular sense, he can recognize position in which fingers are placed approximately, but cannot recognize the exact position of a finger unless it be fully flexed or fully extended. The muscular sense would appear to be slightly impaired, but very slightly so.

Feb. 15th. Wrist jerk is marked in left wrist. Some flexion and extension of thumb. Movements of fingers almost entirely through long flexors and extensors. Individual muscles of hand still have but little power. When he contracts the muscles of left hand with much effort, the muscles of the right hand involuntarily contract.

Feb. 18th. Had a spasm on the 15th, none on 16th and one on 17th. Left hand stronger, the patient now doing with dynamometer L 45 R 133. Patient continued to improve, the left hand growing steadily stronger, and went home Feb. 23rd.

I heard nothing further of him until he called at my hospital Sept. 7, 1899. He said that after his return home the attacks became more frequent for about six weeks mostly limited to the left arm. They would run he said to the site of the operation and then stop. He never lost consciousness. The fits gradually became less frequent until about six weeks ago since which date they have entirely ceased. He has been doing ordinary farm work and uses his left arm and hand for all purposes experiencing no inconvenience except for a slight difficulty in some of the finer movements of the fingers. All the muscles are well developed and of good strength. He said that the attacks after his return home began in little finger or the thumb of left hand. No disturbance of any form of sensation. He says he feels perfectly well in all particulars being able to do as good a day's work as ever and expresses himself as much pleased with the result of the operation. I have not seen him since.

In regard to the site of the operation. As the attack was always announced by an aura consisting of a sensation beginning in the left forearm, to be followed by a contraction of the forearm muscles and those of the left hand, I considered the centre of irritation to be in the middle third of the ascending frontal convolution of the right hemisphere. In order to reach this centre I located the site of the trephine by the measurements mentioned and Dr. Grasett kindly trephined for me in this location, contraction of the extensor muscles of the forearm resulting from stimulation to the cortex in the centre of the trephine opening.

There resulted from the operation: (1) A complete paralysis of the hand, wrist and forearm which gradually all but disappeared. (2) No disturbance of sensibility of any kind either of touch, pain, location, temperature or of muscular sense if we except a slight diminution of this latter some days after the operation. (3) A recurrence of the attacks in the left forearm and hand while these were completely paralyzed. (4) The aura did not begin in same location as before the operation. (5) The cessation of the attacks as above mentioned. In regard to the first and second results just mentioned, that paralysis would result from excision of a portion of the Rolandic area was naturally expected but this case is of interest in view of the question of this area being a centre of sensation as well as of motion, a hypothesis which has excited endless controversy for the past few years. Some of the various hypothesis in regard to this area may be interesting: Schiff holds that this region is the centre of tactile sensibility, Munk thinks it a general sensory area, Nothnagel and Hitzig that it is related to muscular sense, Bastian that it is kinæsthetic, Horsley that it is a centre for muscular sense, with tactile

sensations to some extent, while my former teachers, Prof's. Charcôt and Ferrier, hold that this area is a true motor zone in which centres for movement which involve conscious discrimination are represented. This case shows that with the excision of a portion of the Rolandic cortex (presumably a portion of the middle third of the ascending frontal convolution) that motor paralysis alone results, the various forms of sensibility including those of touch, pain, temperature and muscular sense remaining absolutely intact. While this is the only one I think the clear results which have here followed an excision of a small portion of the Rolandic area, viz., a complete motor paralysis which was not accompanied by any disturbance of sensibility in the parts implicated is worthy of note. In regard to the third result above mentioned the recurrence of the attacks in the paralyzed muscles. It would here seem that the theory of Hughlings Jackson that epilepsy is due to an interference with inhibition through irritation of the higher cells of the cortex is not alone sufficient to account for the phenomena of epilepsy, at least in the case under consideration since here these cells were destroyed. It would however tend to establish the experimental conclusions of Nothnagel that there is a lower convulsive centre in the floor of the fourth ventricle. In regard to (4) it was remarkable that the aura after the operation never began in the same location as it had invariably done for several years previously but would first be felt in different portions of the arm either about the biceps or posteriorly. This is the more noteworthy since there had been no disturbance of sensibility in the parts paralyzed by the operation. In regard to the course of the attacks after the operation. He continued the bromide treatment during his stay in my hospital but gave up all medicines soon after his return home. That his attacks had entirely ceased for some time before he last saw me in September and the fact that he was able to follow his usual vocation at this time without inconvenience was gratifying but the period which had elapsed since the operation was not sufficiently lengthy to allow a definite conclusion to be formed of the ultimate result.

SELECTED ARTICLES.

THE HOT-AIR TREATMENT OF ECZEMATOUS, GOUTY, RHEUMATIC AND OTHER AFFECTIONS.

The Lancet of August 18, 1900, has in it an article by Walsh, in which he states that the free interchange of opinions and observations being at the root of medical progress there need be little hesitation in bringing forward a brief description of a comparatively new therapeutic method. In the present instance it is proposed to relate from personal experience the chief points of interest with regard to the superheated air treatment of eczematous, arthritic, and other diseased conditions. The special treatment consists in the local application of dry hot air at an exceedingly high temperature. The therapeutic results of this increased administration of heat have been, to say the least, remarkable. In this way many chronic and painful conditions have been brought within the range of relief and sometimes of cure, and there can be no doubt that a new therapeutic agent of value has been placed in our hands.

The apparatus consists essentially of a cylinder in which a part of the patient's body, say an arm or a leg, is enclosed and fastened in by an air-tight curtain. Heat is applied by means of gas, oil or electricity until the air inside the cylinder reaches the desired temperature. Before the treatment is applied the patient is stripped and wrapped in blankets, while the part placed inside the cylinder is covered with a layer of lint. After a varying period there is free acid sweating, together with increased frequency of pulse, while the body temperature is raised 2° or 3° F. In addition to these changes there is often an immediate and striking relief of pain, and the range of movement is increased in stiffened joints. These two last mentioned facts point to a deep therapeutic action beyond the obvious surface diaphoresis. It will also be observed that although the application of the heat is local, yet the effects upon the body are general, as shown by the quickened pulse, the free sweating, and the raised temperature. For that reason pain in a foot may be relieved by placing an arm in the apparatus, and a stiff elbow may move more freely after local treatment of a leg. These are things that admit of definite statement. The free action of the skin is accompanied by increased elimination from the kidneys. Dr. Chr  te  n, of the Laennec Hospital in Paris, has recorded the fact that in a case of long-standing gout the daily elimination of uric acid by the kidneys was found to rise from 57 centigrammes after the fourth bath to 89 centigrammes after the ninth. It is to this increased kidney action that the benefit of the superheated air in gouty conditions is doubtless to some extent due.

It will naturally be asked, What cases are suitable for superheated air treatment? Generally speaking, the treatment is likely to do good in (1) painful nervous affections; (2) many painful and stiffened joints;

(3) other diseases—*e.g.*, anemia and Bright's disease; (4) eczematous skin trouble; and (5) arthritic diseases, rheumatism, gout, and their allies.

NERVOUS AFFECTIONS, SCIATICA, LUMBAGO, WRITER'S CRAMP, CHOREA, LOCAL ATROPHY.—The relief of pain often obtained by the hot air naturally suggested the treatment of nerve pains. It was found that some obstinate neuralgias and sciatica yielded readily to a few applications. At the same time it should be noted that a few cases of sciatica resist this, as they do every other form of treatment, from simple massage up to heroic nerve stretching. On the other hand, the hot-air treatment now and then cures obstinate sciatica in a rapid and brilliant manner after the failure of other remedies. This uncertainty of result is probably due to the varying origin of the pain in a structural neuritis or a functional neuralgia. The effect of the hot air may be aided by passive motion to break down adhesions, followed by a period of complete rest. Writer's cramp is a neurosis that in several recorded instances has been quickly cured. In one case under the author's care the patient was able to write a newspaper article after being treated a few times. Chorea, even of a severe type, may be cured with a quickness and success rarely known to drugs.

PAINFUL AND STIFFENED JOINTS.—The immediate relief to pain is one of the most remarkable results of the hot-air treatment. Were there no other good effect that alone would justify the existence of the cylinder. Narcotic drugs are only in a limited sense curative; they dull the perceptive centers, but leave the seat of active mischief untouched, while they are apt to do a great deal of mental and bodily harm. With the Tallerman treatment, on the other hand, the relief is often rapid and permanent, and when it fails to relieve it has the great advantage of doing no harm. With regard to stiffened joints, the amount of good effected by the superheated air depends to a great extent on the nature of the limitation. Where there is bony union, of course no good can be done so far as movement is concerned. Neither can much be hoped for when the joint is hopelessly disorganized, as in a Charcot's joint or in the later stages of osteoarthritis. Where the limitation of movement, however, is due to fibrous ankylosis, to synovial thickening, or to adhesions generally in or around a joint, the results of the Tallerman treatment are often brilliant. After a single application the range of movement may be visibly increased and pain abolished. In some cases it is advisable to break down adhesions under chloroform. In dealing with joint stiffening, therefore, it is necessary to make a careful diagnosis as to the structures that are at fault and the stage at which the diseased process has arrived. In early osteoarthritis it is possible to arrest the malady, whereas at an advanced period, when the articular surfaces are eburnated and there is a large amount of periarticular deposit, all that can be hoped for is to diminish the pain which is now and then so prominent a symptom. Where the mischief in a joint is no longer active the hot-air treatment may be applied irrespectively of the origin of the malady, whether that be gouty, rheumatic, osteoarthritic, gonorrheal, or traumatic, and so on.

GONORRHEAL RHEUMATISM.—As every one knows, gonorrheal rheu-

matism is often most rebellious to ordinary treatment. Under the hot-air treatment, however, it often yields in a way that is not less rapid than satisfactory.

ANEMIA, BRIGHT'S DISEASE, ETC.—Without entering into details it may be stated generally that cases of anemia often benefit to a marked extent under the hot air treatment. This may be to some extent due to the fact that chronic constipation is often markedly relieved by the treatment, especially when applied to the abdomen by what is known as the "hip bath." Asthma, chronic bronchitis, dropsy, Bright's disease, dysmenorrhea, and some forms of heart disease may be benefitted by the treatment.

THE ARTHRITIC GROUP.—It is curious that in such well defined diseases as gout, rheumatism, and osteoarthritis we know so little that is definite with regard to their origin. We are agreed that an excess of uric acid is constantly present in the blood of a patient who has gout, but we cannot say whether it is produced by, or even whether it is the cause or the result of, a damaged kidney. Nor is the etiology of rheumatism less obscure, although recently there has been a tendency to attribute the malady to a bacterial origin. In osteoarthritis we are more than ever at fault, as we have a condition in which gouty, rheumatic, vascular, and nerve troubles may be present singly or together in a malady that destroys the joints progressively. Acute gout and acute rheumatism we are able to control by drugs—by colchicum and saline aperients in the one, and by salicin and the salicylates in the other. Few medical men, however, would claim a definitely curative action in either case. When we come to subacute and chronic gout and rheumatism most of us will admit that there is little hope of controlling, and still less of curing, by means of drugs. It may be said of both diseases, as a recent writer has said of gout, that "as regards diet, exercise, and even drugs, each case must be treated more or less experimentally, and later by the light of such knowledge as experience of the individual case may give."

When we come to osteoarthritis the confession of helplessness is still more emphatic. As a rule a patient attacked by that disease has nothing to look forward to but a life of progressive misery and suffering. Acute gout can be controlled by the hot-air cylinder. Acute rheumatism, so far as one knows, has not been thus treated. Subacute and chronic conditions of both gout and rheumatism are often either benefitted or cured by the treatment. Last, but not least osteoarthritis may be checked in its early stages, while later pain may be relieved, the movements of crippled joints restored, and the progress of the disease arrested. In making these general statements as to the chronic joint stiffenings due regard must, of course, be paid to the condition of the joint. At the risk of some repetition it may be pointed out that in an advanced stage of disorganization all that can be hoped for is to relieve pain and check the progress of the disease.—*The Therapeutic Gazette.*

THE DANGER OF SPINAL ANESTHESIA.

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Shortly after the introduction of cocain as a local anesthetic, Dr. J. Leonard Corning, of New York, demonstrated that it was possible, under its influence, to remove large tumors and perform amputations. Continuing his researches, he developed, in 1885, a method of injecting the drug into the vertebral canal between the spinous processes where it "should become absorbed by the minute plexuses of veins and so carried to the cord." Quite recently, Professor Bier, of Kiel, has advanced one step in this practice and deposited a solution of cocain within the subarachnoid space. His example was speedily followed by Oberst, Seldovitch and other European surgeons, and, above all, by Tuffier.

This practice is now extending to the United States and other countries. Various reports have been published, narrating its successful application in major operations involving the lower extremities, genital organs and abdominal cavity. Anesthesia ensues within five to ten minutes and continues for half to nearly an hour, or has even been prolonged to five hours in cases of parturition.

Mixing with the cerebrospinal fluid the solution of cocain speedily affects the sensibility so profoundly that, although the sense of touch remains unimpaired or at least is not obliterated, the perception of pain is destroyed.

The subarachnoid space should be quite as good an absorbing medium as the subcutaneous cellular tissue. On one side is a delicate serous membrane and on the other a mesh of capillary blood-vessels, the whole being in direct communication with both spine and brain. It is known that the cerebrospinal fluid is both produced and absorbed with great rapidity. There would seem, therefore, to be every reason why the characteristic physiological action of cocain should be quickly manifested and, indeed, with accentuated power, inasmuch as it is injected in such close proximity to important nerve centers. One writer, Dr. S. Marx, of New York, explicitly says that in a case when he had injected 1/6 of a grain into the canal he got dangerous symptoms of morphin poisoning, "showing how strong is the absorbing power of the spinal fluid." What is true of morphin must be equally true of cocain.

The drug is liable, in excessive doses, to disturb seriously the innervation of the heart and lungs, to depress the circulation, cause rapid and weak cardiac action, and render the respiration labored and shallow, while in some instances it produces thrombi and emboli. Severe toxic manifestations are not always fugitive. The phenomena of acute cocainism have been known, from ordinary hypodermic injections of moderate doses, to extend over a considerable period of time and cause severe dis-

tress, if not danger to life. Constant headache, habitual insomnia, vertigo, syncope, dejection of spirits and presentiment of approaching death, prickling and numbness, with other serious symptoms, lasted for several months as a consequence of a single injection of $1/8$ grain. Death has resulted from the incautious employment of cocain. It must be remembered, moreover, that this is a treacherous drug. In many individuals there is a peculiar sensibility to its influence and a small dose may be followed by a severe reaction. I recall the case of a young lady to whom a moderate dose of cocain was given in the form of a suppository. Very pronounced intoxication occurred, with marked intellectual confusion, anxiety and decided depression of the heart's action. If such unexpected results follow the administration by mouth, rectum or hypodermic injection of a quantity far within the limits of supposed safety, I can not but be apprehensive that the successful course of the new operation of spinal anesthesia will be vehemently interrupted by dangerous and even fatal accidents. It is now thrown into the subarachnoid space in a 2 per cent. solution and the quantity usually introduced is equivalent to $1/6$ of a grain, although I read of larger amounts— $1/5$ to $1/4$ grain—being employed, or of repeated injections being made.

The operation, indeed, is not always so easy as it has been represented. I have myself been an eye-witness on more than one occasion to prolong efforts before the vertebral canal and subarachnoid space could be entered, the operators being men of eminence and manipulative ability. Dr. S. Marx, who writes approvingly of the procedure in obstetrics, says: "As a rule a puncture is very easily done, but in some few cases there has been the greatest difficulty in its performance. In one case six distinct punctures were made before the tap revealed fluid. In one case with an antecedent lumbar dis-ease I failed absolutely, and was compelled to make the injection in the dorsal region, and then with good success." When we consider that this author's latest report¹ embraces only 23 cases, the few cases of difficulty will swell into a large proportion. The same writer, furthermore admits that "explorations, versions, extractions, placental removals were readily done, not with quite as great ease as under chloroform, but with greater facility than in a non-narcotized woman." I have seen a single injection give rise to alarming symptoms of respiratory failure. The procedure is likewise productive of marked pain, and in order to avoid this effect, Bier and others have employed Schleich's infiltration anesthesia as a preliminary measure.

A number of writers have made allusion to inconveniences attending the method. In some cases chill and fever have followed the injection. Severe and long-continued headache has been noted in other instances and, in fact, seems to be a common manifestation. Distressing nausea and vomiting have also been excited. In exceptional instances staggering gait and sharp spinal pains were experienced on the day following the injection. In some patients free sweating and in others marked debility have occurred. Numbness and tingling are other accidents which have been mentioned. In some cases anesthesia was not produced by the operation. Writers have generally presumed that this failure indicates that the fluid had not entered the subarachnoid space,

but this is scarcely a sufficient explanation. Injections into the subcutaneous tissue cause local anesthesia, and the solution must have been absorbed, although perhaps not so rapidly as if it had penetrated the selected space.

Dr. John B. Murphy, writing in the *Chicago Clinic*, for September, 1900, includes among the advantages of spinal anesthesia, "the avoidance of one of the greatest dangers to surgical procedures at the present time, namely, the primary, intermediate and secondary sequences of the anesthetic, as cardiac phenomena, pulmonary lesions and renal disturbance." Nevertheless, some fatal cases have already occurred from medullary narcosis. Tuffier, reporting to the Thirteenth International Medical Congress in regard to this operation, stated that death had taken place in five cases. In four of these the fatality could not, in his opinion, be attributed to the operation. The fifth patient had died of asphyxia, due to pulmonary congestion complicating a mitral insufficiency. Gumprecht believes that as a rule the operation is unattended with danger, yet he cites a dozen or more cases in which death had followed. Most of the cases collected by Gumprecht were of intracranial tumor and death was caused almost invariably by respiratory paralysis. Although in any circumstances the patients could not have lived long, yet it is admitted that the puncture was undoubtedly the determining cause of death.

It is conceded by all that the operation should be practised under the most rigid aseptic precautions. In the present state of surgery, however, the proviso is a matter of course and applies alike to every intervention.

I would not be understood as condemning absolutely the production of spinal anesthesia or as denying that it may have a field of usefulness. It is our duty, however, to be cautious in this matter. One hundred odd cases by one surgeon without a death has a very promising sound, yet experience has been too short and the total number of cases is still too few to warrant positive conclusions. Every operation should be regarded in the light of an experiment. The danger signals should not be underestimated. It is not wise to teach that this procedure is easily performed, painless and free from danger. Such statements do not accurately represent the subject in question. If we reflect on the number of times that a general anesthetic is administered far more often than any statistic exhibit; when we consider, moreover, the number of parturient women who may require more or less anesthesia at different stages of their accouchement and for various reasons, we must acknowledge that a few hundred cases constitute but slender evidence for positive assertions. Gurlt, in his studies of general anesthesia, tabulated 14,506 cases in which ether was used by German surgeons without a death. Julliard collected data relative to several hundred thousand administrations of ether and chloroform. In the presence of such figures we should be extremely circumspect in promulgating advice.

Dr. Corning himself is the latest writer on this subject. From a paper entitled "Some Conservative Jottings Apropos of Spinal Anesthesia," I select the following passages:

The most recent physiology favors the close reciprocal relations

between the cerebrospinal fluid and the circulation of brain and cord . . . And now a further word or two as to the danger of expecting too much from this discovery and of bringing it once more into neglect certain to follow in the train of disappointed hopes. First and foremost, it is necessary frankly to look at facts and confess that there is nothing in those till now brought forward remotely to warrant the belief that the days of cerebral or general anesthesia are numbered. Some curtailment in their use there may, ay, doubtless will be, but abdication of their broad dominion—never. Again, it is absolutely necessary to remember that, despite all apparent conformity with the exactions of technique, spinal anesthesia sometimes leaves one in the lurch. To what is this failure to appear ascribable? I do not know nor have I yet come upon a convincing explanation. Cases are on record, too, in which the anesthesia was not of sufficient duration, and the injections had to be repeated, always a deplorable circumstance. Every one at all conversant with the serious results inevitably following infection of a serous cavity must be profoundly impressed with the necessity of a rigid asepsis. This point has been insisted upon by most if not all recent writers. Yet I foresee that amid the indiscriminate slitting by irresponsible persons, sure to follow in the wake of the conservative achievements of the judicious and the competent, there is likely to be a neglect of those necessary and elaborate rules of antisepsis so necessary to the safety of the subject. Then a procession of gory tales; and a great and useful principle cast into shadow by the misadventures of a herd of venturesome empirics. There will be fatalities; but let there be a concerted effort by the invocation of every known precaution to keep the percentage of mortality as low as possible. Let there be less rivalry of the knife—less endeavor of one to outslit the other—and more attention to improvement of method.

THE ADVISABILITY OF EARLY OPERATION IN CASES OF ACUTE INFLAMMATION OF THE APPENDIX. (a)

By CHAS. W. MANSELL MOULLIN, M.A.Oxon., F.R.C.S.,
Surgeon to and Lecturer on Surgery at the London Hospital.

After giving a brief account of the pathology of inflammation of the appendix, showing that it always originated from the invasion of the mucous surface by septic organisms from the interior of the bowel, Mr. Mansell Moullin divided the cases so far as surgical treatment is concerned, into three main groups. The first, which is by far the largest, includes all those mild attacks which subside of themselves or under the simplest treatment. In these the organisms are destroyed or removed before they can do any permanent harm; the lymph which has been poured out disappears again without leaving any adhesions, and the appendix regains its normal size, shape and mobility. These need no surgical treatment. In the second group are comprised all those cases in which the absorption of the exudation is incomplete. It soon becomes

(a) Abstract of paper read before the Harveian Society, Oct. 18th, 1900.

organized. In others it breaks down into pus. In others again a concretion is left behind. But all agree in this one particular, that perfect recovery is impossible without operation. Finally, there is the third group, fortunately by far the smallest, in which acute septic peritonitis breaks out, and in which the only possible chance of recovery is immediate operation. In all acute attacks it is absolutely essential to group the case in one of these three classes within 36 hours of the beginning of the symptoms, or it may be too late. It is known that the interior of the appendix is full of septic micro-organisms. It is known that, if the conditions are favourable to them, they can penetrate through the wall, and infect everything. And it is known the appendix is hanging free in the peritoneal cavity. The danger is not in performing a simple exploratory operation, but in delaying to do so. All that is necessary is an incision an inch and a half long, and the introduction of the finger, in order to ascertain exactly what is the condition of the appendix and the peritoneum around it. Mr. Mansell Moullin then discussed the symptoms by which the cases which would recover of themselves might be distinguished from those in which operation would be required, sooner or later, either because of diffuse septic peritonitis, or because of the formation of adhesions, strictures, and concretions. The pulse was the most valuable of all. If the pulse rate at the end of 36 hours, while the patient was lying in bed, was over one hundred in the minute, or if, in the course of the last few hours, it had increased much in frequency, there was no doubt the attack was a severe one, and that operation would be required. The temperature was no certain guide, unless it continued to rise. The intensity of the pain was of great significance, and so were also, but, perhaps, in less degree, local tenderness, muscular resistance, and a sense of fullness in the right iliac fossa. Vomiting, constipation, and the other symptoms usually present could not be relied on in the same measure. Mr. Mansell Moullin laid great stress upon the fact that the absence of any individual symptom was of no account, and that operation should be performed in any case in which the pulse was rapid, even if the other symptoms did not point to any great degree of severity. If morphia had been given this rule should be even more stringent. The limit of 36 hours, Mr. Mansell Moullin admitted, was a perfectly arbitrary one. All could not wait so long. Some might wait longer without undue risk. Each case must be judged upon its merits, and this must be regarded merely as an average. The point to bear in mind is, that at the beginning of a severe attack we cannot as yet distinguish cases which might be allowed to wait from those which cannot; that they will, all of them, have to be operated upon at last, some for adhesions, some for abscesses, some for concretions or other causes (for severe cases do not recover without some complication being left); and that it is wiser that a simple, and practically safe, operation should be performed at once upon all of them, rather than that the disease should be allowed to run its course, and that those in whom diffuse septic peritonitis occurs should be allowed to die, in order to save the others from an operation they will have to undergo later. It is merely adopting the general principle that when there is a grave possible danger ahead, and there are no means of finding out the condition

of things, or of controlling the issue, it is wiser to see how matters stand provided it can be done without undue risk, than to trust to chance. But a preventive operation of this kind must be clearly distinguished from what are commonly called early operations, those performed on the fourth or fifth day, which nearly always are too late, and simply serve to bring surgery into discredit.—*The Medical Press and Circular*.

PREVENTION OF INSANITY.*

BY BROOKS F. BEEBE, M.D., Cincinnati.

Professor of Mental Diseases, Medical College of Ohio (Medical Department University of Cincinnati).

If there is one mission on earth higher and holier than another, that mission is the prevention of disease. It not only lessens the pain and suffering of the individual directly, but indirectly it contributes to the greatness of a nation by fostering a happy and healthy people.

One of the greatest anomalies of human conduct, considered in the light of the ordinary ways of the world, is that the physician is one who not only heals the sick and alleviates suffering, but is ever striving to prevent disease, though by so doing he is conscious that he reduces his income to a minimum. No other profession or walk in life is so imbued or so conditioned. How is this accounted for? Explanation is to be had in the fact that he is a conscientious seeker after the truth, a true scientist in the best sense of the word. Thus it is that he learns that the interests of self are, more or less, the interests of all; and all interests are so woven together in the tangled web of life that he knows not his own thread. "Lose yourself in the oneness of nature," and "Love your neighbor as yourself," have a depth of meaning far beyond the ken of ordinary man. They are the basis not only of a happy and successful life, but they give a healthy tinge and tendency to those who follow. They who have no altruistic feelings beget degenerate offspring, if they beget at all, for it is the anti-social characteristics of mankind in the home and among the people that breed insanity, crime, disease and death.

We are what we are from three principal causes—heredity, education and environment. Therefore, see to it that they are what they should be. I believe that experience is the source of all knowledge, either directly or indirectly, *i.e.*, personal or ancestral. At any rate, it is only by knowing our relations to the external world that we are enabled to adjust ourselves to a happy and satisfactory end, and he who cannot so adjust himself is unsound, either in body or mind.

What a pity it is we cannot know the final effect of our every act, and have the power to do or not to do! There would then be no sin or sorrow, no sickness nor suffering. But let us not be faint hearted. When we but recall and appreciate the great advance that has been made in our science during the lifetime of some present here to-day—too great, in fact, for a pen as frail as mine—may we not look forward with the hope

* A paper read before the Miami Valley Medical Society, at Loveland, O., October 23, 1900.

and assurance that the future has in store for humanity a future more delightful than is dreamed of in our philosophy? There is nearly one-half, or 50 per cent., less sickness in Cincinnati, in proportion to the population, than there was forty years ago, we are told by good authority. While this is true of public health in general, and that longevity is also increasing from year to year, it is, unfortunately, not true proportionately of insanity and allied diseases. They are on the increase the world over, and it becomes the duty of the physician to see to it that the people, individually and collectively, learn more of the causes and thus be enabled "to turn from the error of their ways," as the preacher sayeth.

What are the causes and what the prevention? For in considering the one we must look to the other. You are aware, as I am aware, that the subject is a comprehensive one, and as complicated as comprehensive; but I shall confine what I have to say to a few of the most important etiological factors.

Were it not for the fact that the lineage of insanity, stupidity and perversity is a short one, for, as is said, "civilization is a vast instrument for the killing of fools"—were it not for the fact that the very constitution of the nervous system is so delicate and highly organized, and, like the tender twig, easily swayed by the lightest breeze, but a few short years would be required to sweep humanity from the face of the earth.

The most powerful cause in the production of insanity, and the one most constant in its operation, is to be found in heredity. As is well known, the fundamental law of heredity is that every attribute of the parent *tends* to reproduce itself in offspring. If not present in the first generation, it is expected to appear in later ones. It is the first law of our existence. Why, we do not know; but it is so, else man would bring forth cats and dogs and monkeys as offspring, rather than his kind.

Disease itself is not inherited, with a very few exceptions perhaps; but we do inherit, from defective parents, a peculiar type of constitution that will take upon itself disease with the slightest provocation.

It is said that "he is a wise child who knows his own father." The child of the future will have more wisdom than those of to-day or those of the past, and it is not beyond the possible that then he may address his father something after this style:—

"My paternal ancestor, I have the stigmata of degeneration, of congenital cause; my teeth are all on edge, and evidently, sir, your appetite for fruit in the past must have been for a kind that was excessively acid. Look at my dentine structures—pegged and notched, and too numerous for my oral cavity, though it is of abnormal dimensions.

"My ears are deformed, unequal in size and out of place, and one to my neck has grown; the other is large and the folds all lost. O God! why was I ever born?

"My nose is crooked, the septum's bent, the bridge is low and broad. My eyes oblique—the almond kind. Oh! I *wish* I were under the sod.

"My lip is cleft, and palate too; my feet are clubbed, and webbed my hand; one eye looks here and the other looks there, and I have the blues 'to beat the band.'

"My stature is short and very ill-shaped, entirely too weak to carry

my head, which is big and square—hydrocephalus. Say, *what a life you did lead!* Now the devil's to pay."

In baseball parlance, the young fellow had gotten on to the curves of his father's balls and made a *home strike*. Here was a case of a degenerate son of a degenerate sire—a physical deformity from a moral obliquity.

Huxley says: "There can be no alleviation of the sufferings of mankind except in absolute veracity of thought and action, and a resolute facing of the world as it is." There is no need railing against the so-called severities of life, for we must admit the justice in "the survival of the fittest," and in the tyranny of organization. God is good, but He is merciless. Nature is the same for all. Survival of the fittest does not, however, always mean the best, but it means the fittest or the most suitable for the environment in which it is situated—a savage in a savage state, or a civilized man in a civilized state.

But not only is *physical* development determined to a great extent by heredity, but what is more important, psychic peculiarities are also impressed. And not only does good or bad quality appear as a result of this fundamental law, but *form of feature and body may be deformed, or dehumanized, by the brutish and immoral natures in parents*, though they may be of *perfect form themselves*. This is a point that is not generally understood, much less impressed, by our profession, and, of course, it is to the medical profession, and particularly to the general practitioner, that the people must look for instruction and future improvement.

First, then, it is the duty of the physician to do what lies within his power to have only suitable marriages sanctioned. Physicians should not only instruct their *clientelle* as to the dangers that follow the wedding of disease, but also assist in the formulating and passing of such laws by the State as will prohibit those marrying who, from defect of body or mind, are liable to bring forth degenerate progeny.

A confirmed or habitual criminal has no more right to marry and propagate his species than a person in the last stages of tuberculosis. The one is diseased in mind and the other in body. It is cruelty to the newly-born and to the parents; it is cruelty to the State, which is forced to support such people. In my humble judgment, the greatest kindness to this class of human being, producing the most happiness and good to them, not even mentioning the rest of the world, would be to pen them up in well-ordered institutions, compel them to work enough for their own maintenance, and then force them to an education; force them to know and realize not only their rights, but the rights of others.

The ordinary jails and workhouses, as now conducted, are more of a place for the dissemination of criminal impulses, which in reality constitute disease, than it is for corrective good or even the protection of society.

Another feature that I think is too much neglected by the physician is the care of the impregnated woman. Man does not hesitate to take extraordinary care of blooded animals on a stock farm, but fails to see that direful and everlasting impression may be made on his own progeny

by improper treatment of his wife, especially during the period of gestation. Too often he defines "marriage as a prose translation of the poem entitled 'Love,'" and makes practical the saying that "familiarity breeds contempt." From the day of conception—nay, from the very commencement of the formation of the human ovum—to the day of birth of the fully-developed fetus, the young is susceptible to maternal impressions modified in various ways by the male element.

When we know, as we do, that 75 per cent. of idiots, for instance, are so damned at the moment of impregnation by parents under the influence of alcoholic intoxication, and that monstrosities may be produced at will in the chick by injecting a few drops of alcohol under the shell of the hatching egg or by subjecting it to alcoholic fumes while incubating, it is high time that men who have any scientific attainments at all should hoist the flag of danger to its topmost limit.

Not one tenth part of the ravages produced by alcohol has ever been told to, much less appreciated by, people in general; and only when Mr. A's or Mr. B's or Mr. C's neighbors learn that his idiotic or defective child was the outcome of his vicious conduct or depraved condition will he wake to the realization that he has been guilty of a monstrous crime. The time is coming, and is not far away, when the fingers of derision and scorn will be pointed at the authors of more diseases than those of venereal character.

The next step in the prevention of insanity is in regard to the rearing and education of children. Everyone knows that this is a tender age, that the child's mind as well as his body is very easily moulded; and yet how few are conscious of what is really going on from day to day right under our very eyes and nose! The condition, politically and scientifically, smells to heaven, and with imploring eyes and outstretched hands it is continuously addressing prayers of supplication, finding but little relief. Very few people know that home quarrels and scoldings and bickerings are the starting point, and always a furthering cause when degeneration already exists, that make a child a true neurotic, a mental cripple, often, for life.

Heaven and hell are states of being; happiness is heaven and misery is hell. How few parents ever realize that they are directly and indirectly responsible for sending their children to hell? See to it that there are more happy homes.

On the subject of improper schooling whole libraries might be written, but I presume a halt will never be called in our latter-day school methods until the medical profession can succeed in trepaning the heads of those in authority with a trephine of object-lessons or clinical illustrations.

We know that the great preponderance of insanity—barring hereditary depravity—comes from the cultured and refined. The cause certainly is not far to seek. "Greatest care must be exercised, else in the refining process, little will be left of the metal of knowledge."

We know that insanity is appearing at an earlier age than formerly. We see more precocious children to-day than ever before, and both

parent and teacher, ignorant of the harm they do, are wont to push them along more rapidly, and show off their accomplishments and advanced proficiencies, which are too often the evidence of over-strained degeneracy. Precocity is in fact, abnormally—inferiority. When such is observed in a child immediately “the breaks should be applied.” Such children should be turned out to pasture, so to speak, like blooded colts, and allowed to run wild until such time as their physical bodies are most likely to endure the strain of the race for life. The metal is there and it requires a good judgment for proper development.

When we recall the fact that one-third of the blood of the body is required for *ordinary* brain use, if greater demands are made from that organ by the cramming process so universally in vogue in our city schools, it is easy to see that the rest of the body is insufficiently supplied with nourishment. With what result? That there is developed a puny, pceevish, anemic weakling, in whom *cannot exist that equipoise of thought and feeling and will power that constitutes true character*, and enables the individual successfully “to face the world as it is.”

These three functions or faculties of the mind—emotions, intellect and volition—we say are always the basis for diagnosis of mental condition, and only when properly balanced and properly developed can we pronounce sanity. Overstrain is always a tearing-down process, while a limited amount of exercise, of muscle or mind, is ever a building-up performance. The same studies, it is true, do not have the same effect upon all pupils, and hence the greatest care must be exercised by school authorities in the courses prescribed. The physician alone is the one who is able to decide the pupil's condition, and he should be ever alert in school matters. No studying of lessons should be permitted out of school; abundance of fresh air and plenty of amusements should be provided; regular hours and plenty of sleep should be enforced, no stimulants, like tea, coffee or alcoholic beverages, should be allowed—in short, hygienic school houses and methods are essential. Then, when boys and girls have arrived at the age of puberty, especial oversight should be exercised, not only as to their studies and hygienic surroundings, but general conduct, for this is the period

“When the blood runs riot
With the fever of youth and its mad desire;
When the brain in vain bids the heart be quiet,
And the breasts seem centres of lava fire.”

Remember that nerve centres may be exhausted by thoughts and emotions as thoroughly as by muscular action—in fact, action within certain or rational limits is often a safety valve. As President Jordan, of the Leland Stanford University says of the Salvation Army man: “Better let him beat his big drum and make night hideous with his unmusical song than to settle down to the dry rot of reverie or the wet rot of emotional regret.” Give him something to do, but do not let him overdo.

The pathologists demonstrate for us that a nerve cell may be exhausted only for a certain length of time, or to a limited degree, if we would have it repair itself to its normal state. Beyond this indefinite

but definite point lies its death and disintegration. How are we to know when we have reached that point? By the phenomena that result from the deranged functional activity, just as we know when any disease has run its course—by the different set of symptoms and signs as they present themselves. These phenomena, collectively, are called neurasthenia or nervous exhaustion. This is an invariable prodrome of insanity, and hence always of immense importance to an early diagnosis. *If taken in time no disease is more susceptible to cure than insanity*, as later knowledge and methods have plainly demonstrated.

Mental disease being but a symptom of somatic brain disease or brain defect, and psychic phenomena or mind being inseparably associated with the so-called "nuclei or pyramidal cells of the brain, we have simply to study the condition and activity of those cells, together with correlated causes, in order to appreciate what to do in the prevention of insanity.—*The Cincinnati Lancet-Clinic*.

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

The adjourned meeting of the Toronto Clinical Society was held in St. George's Hall on the evening of the 14th of November, the president, Dr. W. H. B. Aikens in the chair.

A CASE OF POST-HEMIPLEGIC MOTOR APHASIA, with exhibition of patient. Dr. W. H. Pepler.

The condition occurred in a man aged 42 years, who complained of intermittent attacks of aphasia following right hemiplegia. The family history was particularly free from nervous diseases. The patient has always enjoyed good health until 1891 when he was suddenly attacked with severe headaches lasting for a couple of weeks, followed by weakness of right arm and leg and difficulty in speech. There was no paralysis of facial muscles and no loss of consciousness. In a couple of days he improved and in a week he was able to work and use his arm a little. Speech also gradually improved. He returned to work in a month's time, and remained well for two years, when he had another attack. At that time he remained in the hospital three weeks, perfectly insensible. At the end of that time he regained consciousness and left. There was no paralysis at that attack. Following that, about six months after, he had a series of attacks of temporary insanity, lasting from two days to two weeks at a time, and six months to eight months lapsing between the attacks. For the last two years, these seizures have altered in character, being ushered in with fulness in the right frontal region. During these attacks he cannot speak voluntarily nor answer any questions. He cannot repeat words and cannot read aloud nor write. Can see objects and people. In most of the attacks he uses "dead propositions," *i.e.*, oaths and unintelligible gibberish. He has tried to continue his work during these attacks. These attacks are very frequent, varying from one to eight in twenty-four hours and lasting a minute or less. If attacked during the night they always waken him up. The patient is of good muscular development although the general expression of face is somewhat dull. Hearing is acute and vision, good. The patellar reflex is slightly exaggerated; pupils re-act well. There is no paralysis remaining now, but there is slight rigidity of right leg. Walking is defective. He cannot turn round quickly with ease. The urine is normal in quality and quantity. The patient has been taking iodide of potash and is now taking a drachm three times a day. No doubt the case was either originally a hemorrhage or an embolus into the first or second branches of the middle cerebral, with some injury to the posterior part of the third frontal convolution.

Dr. Meyers in discussing the case thought he would be inclined to class it with pure motor aphasia, or it probably might be a form of petit mal.

TRAUMATIC PARALYSIS OF THE RIGHT RECURRENT LARYNGEAL NERVE. Dr. H. E. Tremayne, Lambton Mills, who was present by invitation, read the report of this case and presented the patient, a boy aged 15 years. The family history was unknown. The father was a laborer and had suffered from rheumatism; the mother was healthy. One sister was a deaf mute. The patient was under-nourished and emaciated; pupils dilated; thyroid gland enlarged; somewhat short of breath. Had diphtheria, eight years ago; tonsilitis, typhoid fever and rheumatism. Has always been troubled with cough in the winter-time. About ten weeks ago while going up a lift his neck was jammed and following that his voice became very hoarse with slight tenderness on the right of the right sterno-mastoid muscle. The skin was not broken anywhere. When first seen by Dr. Tremayne he was complaining of cough. On examination his heart appears normal. Vocal resonance is increased on the right side. Examination of the throat showed that the right cord was immovable.

Dr. Ryerson examined the patient and said that the whole of that side of the larynx was immovable and that there was complete paralysis, but the arytenoidx on that side moves. He instanced a similar case in a South African soldier who was shot through the neck in whom it was a matter of wonder how it had escaped the arteries.

Dr. Peters said that the presentation of this case recalled one he had seen with Dr. Thistle, a case of ex ophthalmic goitre with a large cyst situated on the right side and close to the nerve. The paralysis which followed after operation for removal of the cyst was probably the result of scar tissue pressing upon the nerve fibres, although it was not complete paralysis.

TUBERCULAR DISEASE OF THE TUBES WITH ACUTE PERITONEAL INFECTION. Dr. H. A. Bruce. This process is usually primary in the tubes although in a few instances the tubes may be involved secondary to the peritoneum. Dr. Bruce recited some of the anatomical and clinical features of the disease. The case reported by him occurred in a woman aged 26 years, who had always been healthy and doing heavy work at service, during which time she was suddenly taken with pain. At first the temperature was 100 and the pulse 110. The abdomen rapidly filled with fluid which was greatly extended with well-marked ascites. Nothing could be felt through the abdominal wall on account of distension. There was no disease in the lungs or in other organs. The diagnosis was tubercular peritonitis or malignant disease. On opening the abdomen it was found filled with dark greenish fluid of which several quarts were removed. There were no small tubercles to be seen or felt. The peritoneal surface was red and soft and looked like granulation tissue. The tubes were removed and subsequently examined pathologically by Dr. Goldie and pronounced tuberculous. Speaking of the treatment of this disease, Dr. Bruce quoted Treves who had reported 300 cases treated by abdominal section, who is of the opinion that good prospects of cure can be promised in from 60 to 80 per cent. of cases operated on. He has secured the best results when the fluid has been simply extracted.

Dr. Primrose spoke about the permanency of cure. He had observed

in his own experience that not infrequently that symptoms recurred even after prolonged intervals. He thought that very frequently the cures were not permanent.

Dr. W. B. Thistle emphasized the necessity of giving larger doses of creasote in both surgical and medical cases of tuberculosis. He thought the surgeons particularly neglected this branch of the treatment. If larger doses, say from 30 to 40 minims three times a day were employed, he thought there would be more permanency to the cures. His method of administering these large doses was in capsule form with bismuth. In support of this he quoted from an article in the *British Medical Journal* where drachm doses of creasote had been given three times a day, and also where several patients had taken 100 minims three times a day.

(a) ALOPECIA UNIVERSALIS. (b) ATAXIC PARAPLEGIA.

Dr. Graham Chambers presented both patients and read notes of the respective cases.

Alopecia Universalis.—The patient was a female of twenty years of age. She said that her hair began to fall out in patches when she was five years of age. From this first attack she completely recovered. At the age of twelve she again became bald in patches and since that date she has never been free from the disease. The patient was admitted to St. Michael's hospital in March, 1898. At that date the lesions had the appearance of those of common form of alopecia areata. She was treated by local applications of chrysarobin, trikresol, carbolic acid, etc., and tonics internally. The condition of her scalp improved for two or three months but it then gradually grew worse. The hair fell out not only from the scalp but also from the eyelids, eyebrows and from all parts of the body surface and she is at the present time devoid of hair except two hairs on the anterior part of the scalp. While in the hospital in 1898, she was treated by Dr. Roseburgh for interstitial keratitis.

A Case of Ataxic Paraplegia.—A young girl aged 17 years was admitted to St. Michael's hospital on June 1st, 1900. Family history negative except that her only sister when fifteen years of age had curvature of the spine from which she completely recovered. Patient had measles when five years old. Menstruation commenced at the age of fourteen but since has been very irregular. In March last, the cellar of the house where patient worked was flooded with water and she not knowing that she was menstruating took off her shoes and stockings and waded through the water which came up to her knees. Two days after she complained of feeling tired and that her left leg felt so heavy that she could scarcely lift it. About a month after the disease extended to her right leg and it was about this date when the patient was first examined by Dr. Chambers. She then complained of numbness and heaviness in the legs, but suffered no pain in the legs or back. Patellar jerk is increased. Both ankle clonus and knee clonus present in the left leg; tibial reflex present. Romberg's sign is present; and patient complained that she had to support herself against the wall while washing her face. Since that date the patient has become gradually worse and sensory symptoms have develop-

ed. Patient cannot distinguish hot from cold on the plantar surfaces of the feet and on the sides of the ankle joints. Several patches of the skin between the ankles and the knees are anaesthetic. Sense of locality is disturbed; field of vision normal in both eyes; pupils re-act to light; retina and optic nerve healthy. The sphincters of the bladder and rectum normal. Patient is now unable to walk without aid.

Dr. Thistle discussed the latter case and concurred in the diagnosis of Dr. Chambers. In the case of alopecia, he thought that the loss of the eyebrows meant syphilis.

Dr. Leslie spoke of a similar case of alopecia where a girl was quite bald for a year and a half. Her hair has come back better than before.

Hydatid Cyst of the Pancreas.—Dr. George A. Peters reported this case which occurred in the practice of Dr. McKinnon, of Guelph, and upon which Dr. Peters was asked to operate. It occurred in a young man Spanish by birth, a resident of the Argentine Republic, who in May of 1900 came under the care of Dr. McKinnon. For two or three years the patient had suffered from attacks of pain obscurely located in the stomach and bowels, and latterly had his appendix removed, at which time a tumor could be felt in the left hypochondriac region, which at times was the seat of great pain. The cyst was aspirated and 20 ounces of a limpid fluid of sp. gr. 1013 withdrawn. Much relief was experienced but the cyst slowly filled, and the temperature and pulse showing that a septic process was proceeding it was decided to operate. On examination a rounded tumor could be felt below the ribs on the left side about midway between the nipple and sternal lines. Its relation to the pancreas were determined by stomach resonances above the tumor and between it and the liver as well. Between the spleen, kidney and tumor, resonance was also present. The operation was done from behind, the incision being made along the margin of the erector spinae, three inches long. Considerable difficulty was experienced in its removal owing to the toughness of the walls. An examination of the fluid shows numerous daughter cysts with their attached embryos as well as many separate hooklets. The specimens were exhibited by Dr. Peters and the hooklets were well seen under the microscope. A search of the literature so far by Dr. Peter, reveals no other reported case of hydatid cyst of the pancreas.

In discussing the case, Dr. Bruce thought that it might possibly have been connected with the liver, as these are extremely common.

Replying to this, Dr. Peters stated that the stomach resonance was distinctly to be made out all along the line between the liver and this tumor, and such being the case, he could not see how any one could make it out to be a tumor of the left lobe of the liver.

MISCELLANEOUS.

Kernig's Sign.

Roglet (*Journ. de Méd.*, October 10th, 1900) has made an extensive series of observations on the subject of Kernig's sign. As is now generally known, this sign consists in the impossibility of completely extending the leg on the thigh when in the sitting posture in a patient suffering from certain meningeal diseases. There is a certain amount of contracture of the flexors of the leg. This contracture, on the other hand, disappears, and complete extension can be obtained when the patient is lying on the back. It is easy therefore to elicit the phenomenon if, after having ascertained the absence of all contracture in the supine position, the patient is made to sit up, his legs hanging free, or even sitting up in bed. Certain precautions are therefore necessary. The observer must see that the patient sits straight upright and does not lean to one side or the other, and that the thighs form a right angle with the trunk, certainly not less. Disregard of this point may lead to considerable error. The attempt to obtain Kernig's sign is sometimes attended with considerable pain. The amount of extension obtained at the knee varies considerably. When Kernig's sign is well marked it is impossible to exceed a right angle; when slight an obtuse angle equal to 135 degrees; but intermediate degrees may be obtained. Nor is the sign always bilateral; occasionally it has been observed on one side only, or to an unequal extent in both limbs. The intensity of the phenomenon may vary from day to day, or may even disappear completely. To be therefore sure of its non-existence several observations are necessary. Kernig's sign may appear at the same time as the other symptoms rigidity of the neck, ocular symptoms, contracture, etc., most usually but it appears about the third or fourth day of the disease. In tuberculous meningitis its appearance is most delayed. It is very rare for it to be the only symptom present. Kernig's sign may disappear at variable periods. In meningitis ending fatally it may persist up to the end, but in other cases it may disappear shortly before death, especially in cases where, owing to coma, there is general flaccidity, and all contractures give place to paralysis. It is under such circumstances that Kernig's sign has been missed in several cases of meningitis. The diagnostic value of this sign is considerable, as it has been met with in 85 to 90 per cent. in cases of meningitis. It is, however, present in other conditions with meningeal inflammation—for example, meningeal hæmorrhage and cerebral abscess—but this seems to be exceptional. Its value is reduced, therefore, by the fact that it rarely appears at the beginning of the case or occurs alone. The diagnosis is consequently in many cases apparent independent of this sign. Roglet explains the phenomenon as follows: In a person in a sitting posture with the thighs flexed to some degree and the trunk of the legs extended, the flexor muscles are on stretch,

and their elasticity is soon exhausted. If under the influence of spinal irritation and irritation of the spinal roots, where this may be due to increase of intraspinal pressure or to the presence of purulent exudation, there is naturally produced some increase of muscular tonicity. This diminishes the elasticity and length of the flexor fibres, which then become too short to allow of extension of the leg on the thigh, and thus the sign is produced.

B. M. J.

Curability of Suppurative Cerebrospinal Meningitis.

Archives of Pediatrics, Sept., 1900, quotes from *La Presse Medicale* 1900, No. 39, that lumbar puncture has provided a means of accurate diagnosis of meningeal lesion, so that it is no longer possible to doubt the accuracy of the statement that cases of meningitis are curable. All the forms of simple meningitis may recover; and, while the serous and serofibrinous varieties usually end in cure, recovery from suppurative meningitis is by no means exceptional. Thus Netter is able to report seven cases of suppurative meningitis (seen since May, 1899,) which recovered. The diplococcus meningitidis of Weichselbaum was cultivated from the fluid obtained by lumbar puncture in every case, the fluid being cloudy and having a sediment of pus. The puncture was repeated from one to ten times throughout the course of the disease, the fluid containing fever bacteria in the later punctures and sometimes remaining sterile. Improvement was marked within three to four days in some cases, in ten to fifteen in others; while in one case the disease lasted two months, and more than three months in another. Rigidity of the neck was the predominating symptom in all; ocular paralyses were frequent and were cured perfectly. One child retained some trouble with her hearing, the final outcome of which cannot, as yet, be foretold. The good results are to be attributed above all else to the systematic use of warm baths (38° to 40° C.) given every three or four hours, day and night, lasting twenty to thirty minutes. In order to sustain the strength, subcutaneous injections of the serum were given when the children took food badly. The treatment was used in eleven cases; seven recovered, and of the four who died one was brought into the hospital in a moribund condition.—*Virginia Med. Science Monthly*.

Obstetrics in Paris.

In the October number of *Obstetrics* there appeared a very interesting paper by Dr. N. I. Ratchinsky before the Society of Obstetrics and Gynaecology of St. Petersburg. The title of this paper was "Obstetrics in Paris." The writer had spent last summer in Paris studying the methods and practice of the art in that city. In speaking of the obstetric charities he says that in nine of the thirty municipal Hospitals in Paris there are wards specially set apart for obstetrics, besides two special institutions viz., Beaudelocque's clinic in charge of Pinard and Tarniers' clinic in charge of Budin. These institutions admit women in labor or in the last months of pregnancy. In addition there are two asylums for pregnant women only. All these institutions belong to the city and are under the department of public charities.

The head physician and head surgeon as well as an assistant intern and three assistant externs are appointed by competitive examination which is said to be most rigid; therefore these men are described as showing great ability. In these clinics there are in all about 500 beds. The following tables give the number of births, the morbidity and the mortality in the municipal lying-in institutions as a whole.

TABLE I.—MUNICIPAL LYING-IN INSTITUTIONS OF PARIS.

Maternité, Two University Clinics, and Nine Hospital Departments.

Years.	1894.		1895.		1896.		1897.		1898.	
Total births	13,511		14,172		15,154		16,643		17,724	
Cases and deaths	C	D	C	D	C	D	C	D	C	D
Hemorrhage, pose-partum	47	11	293	8	50	16	35	13	45	5
Septicemia	128	69	40	22	162	110	134	88	106	89
Metropéritonitis, puerperal ..	39	16	41		16	12	8	17	14	
Albuminuria, eclampsia	62	27	11	1	44	32	41	36	61	31
Phlegmasia alba dolens	18	2	13	7	6	1	1	0	10	2
Mastitis, puerpéral	10	0	0	0	10	0	10	1	11	0
Miscellaneous	229	13	243	109	330	20	391	27	318	35
Total	523	138	641	176	632	195	624	173	568	176
Percentage	4	1	4	1	4	1	3.7	1	3	0.8

The second table shows the statistics of Beaudelocque's clinic from its foundation in 1889:

TABLE II.—BEAUDELOCQUE'S CLINIC.

Years.	Total.	Total mortality, including gravidæ.	Per cent.	Mortality from septicemia, in- cluding prema- ture labor.	Per cent.
1889	106	1	1	0	0
1890	1,244	9	0.72	4	0.32
1891	1,654	20	1.20	6	0.36
1892	1,834	8	0.49	5	0.27
1893	1,920	14	0.72	8	0.42
1894	2,139	9	0.42	4	0.18
1895	2,077	12	0.57	5	0.24
1896	2,270	12	0.52	5	0.22
1897	2,314	11	0.47	5	0.21

The solicitude in France for the pregnant-woman is so great that there are institutions where she and her children (if any) are taken and cared for, where she is not expected to do any work. When labor is to take place she is sent to another institution; and afterward there are special institutions where the women are allowed to convalesce after labor. The children are similarly cared for. They are inspected weekly by a member of the staff and ordered if required, sterilized milk regularly free of charge.

In the Charité the mortality among inspected children is 7.3 per cent. while in Paris as a whole it is 21 per cent. This solicitude is said

to be due to two causes. Firstly, the fear of the depopulation of the country since the birth rate has been diminishing so rapidly. Secondly, the humanitarianism which characterizes some public institutions in France.

The teaching of obstetrics in the universities and clinics in Paris is described as both theoretical and practical and most efficient in character. Each student is given three months for the study of obstetrics only, when he is subjected to an amount of very hard work and severe examinations. The results show 40 per cent of failures after these examinations although the students are said to be very hard workers. There are no special courses for physicians who wish to perfect themselves in obstetrics. They must present their diplomas, pay a fee of 30 francs. They may then avail themselves of extra courses as follows: An extra course on operative obstetrics 50 francs. During the summer months the chiefs of clinics give special courses. Budin gives three courses of a month each 50 francs each; Pinard two courses of six weeks each, 50 francs each. Besides these there are private courses to which physicians are admitted; these are more practical in character and more useful to physicians.

For midwives there is the School of the Maternite, a two years' course. The women live in the building, get tuition, board, lodging, etc., for the sum of 1000 francs. Dr. Ratchinsky speaks very highly of the system of residence in clinic in comparison with the system of university instruction given in most countries. He then describes the arrangements of some of the lying-in-institutions. He speaks in high terms of praise of their laboratories, disinfecting rooms, gynaecological operating rooms, isolation rooms, etc.—A description of some of the instruments used in the clinics is then given. Especially the Tarnier's forceps which seem to be used by all. The following rules are laid down for the use of this instrument:—

1. The forceps must always be applied in the transverse diameter of the head. Pinard applies them in this diameter even if the head lies transversely across the pelvic inlet, and at the same time he tries to flex the head as much as possible by pressure with the hand. Budin, however, makes an exception in such cases and applies the forceps in the oblique diameter, a method which is, generally speaking, more rational in view of the fact that the distance between the promontory and the symphysis is the narrowest diameter of the pelvic inlet.

2. Forceps are regarded in France not only as instruments used for traction but also as a means for rectifying the position of the vertex. Pinard rectifies both face presentations by means of the forceps. In occipito-posterior positions he first tries to convert the position into a transverse, by pressure with the hand, and then he brings the occiput forward by means of the forceps, in other words, he rotates the head through an arc of 95°. In cases in which the occiput is in the hollow of the sacrum, Pinard extracts with forceps in the occipito-sacral position, but Budin rotates the head in an occipito-anterior position with the forceps, thus changing the position of the head 180°. This rotation is accomplished by means of the *tiges de prehension* (grasping handles) which describe a broad half-circle and by the application of the *tour de maitre*.

3. Once applied, the position of the forceps in relation to the head is not changed. Therefore, for instance, when the head is rotated with the occiput forward by means of the forceps the latter are not taken out but the head is extracted with the pelvic curve of the instrument directed downward.

4. Pinard does not apply high forceps in a contracted pelvis of the second degree, i.e., when the conjugata vera is less than 11 cm. In these cases he uses symphysiotomy.

Great stress is laid on the external examination of the woman before labor. It is carried out as follows by Pinard. One of the patient's legs is in the extended position, the other bent at the knee, the examining hand passes under the latter. Gentle manipulation is recommended, a "caressing the abdomen" as Pinard calls it. In Pinard's clinic a 5 per cent. solution of citric acid or the juice of a lemon is syringed into the newly-born infant's eyes as a prophylactic against ophthalmia.

The perineum is not supported by the hand in Paris. The tissues are stretched as much as possible to allow the largest diameter of the head to pass under the pubic arch first. The rectal method is not used. The treatment of postpartum endometritis is as follows:

The uterus is irrigated with mercuric bin-iodide solution. The cavity is then dried with a strip of gauze, then an application of iodine made to the endometrium, then the bin-iodide irrigation repeated. The cavity is then dried and tamponed with iodoform gauze.

The anti-streptococcus and anti-staphylococcus serums though used extensively in puerperal affections are described as yielding doubtful results.

D. G. G.

Nasal Hydrorrhoea.

At a debate upon this subject before the Amer. Lar. Rhin. and Otol. Soc. (Laryngoscope for Oct.) it was brought out that this disease was not at all infrequently met with, and that while cleansing of the parts was imperative, the use of the suprarenal capsule extract in powder or in watery solution had been uniformly attended with success. The use of the extract in powder form has in our own experience been found to produce irritation, nor can we think that it is wise to use a powder in this way which undergoes decomposition so readily when placed in water. The solution should always be made with Dobell's solution or with the addition of carbolic acid when plain water is used.

GIBB WISHART.

Laryngeal Tuberculosis.

Vacher (Laryngoscope, Oct.) advocates the treatment of this condition by curettement of the vegetations as an imperative necessity. Following this he uses the following intra-tracheal injection: iodoform, ether to saturation 100, guaiacol 5, eucalyptol 2, menthol 1; of this up to 2 c.c. for each injection. These are well borne, the patient experiencing a sensation of warmth in the entire thorax, almost no glottic spasm, the pains are lessened, taking food easier and breathing more ample.

GIBB WISHART.

Difficult Intubation.

At the International Medical Congress of August last Escat of Toulouse (Laryngoscope, Oct.) made the following remarks about entanglements occurring in the course of intubation in a child. These may occur, 1st, in the inter-crico-thyroid space—the axis of the tube making with that of the laryngo-tracheal canal an angle opened backwards; 2nd, in the right or left ventricle of the larynx, as a result of a deviation from the median plane, either of the tube, or of the laryngo-tracheal canal itself.

To overcome these he suggests that as a first manoeuvre the left thumb be applied to the external crico-thyroid space immediately above the cricoid eminence, exerting there a slight pressure, while the right hand forcibly lowers the handle of the applicator.

The object of this manoeuvre is to reduce as much as possible the angle of such backwards and forwards by the intersection of the axis of the tube and most of the laryngo-tracheal axis.

As a second manoeuvre—the tube being well engaged in the vestibule and the applicator held in the median plane by the right hand, the left thumb and forefinger are used to grasp the larynx and give it lateral movement which will modify the laryngo tracheal axis, and place it in a line with the prolongation of that of the tube.

GIBB WISHART.

An Aversion to Science.

The person with a microscope, he's always hanging 'round,
And scaring everybody with his vision so profound.
If I had paid attention to the various things he said,
I'd surely be so frightened that I might as well be dead.
There isn't any limit to the deadly germs he'll spy—
Whene'er he takes his lenses out and winks the other eye.
I might face the jungle tiger and imagine it was fun,
But this microscopic terror truly has me on the run.
He writes about bacilli who your tissues will explore,
Of the marching microbe millions who are searching for your gore;
He tells of the persistence of these ministers of death,
Till you nearly have a spasm every time you draw a breath.
He even gets up pictures of the surreptitious germ,
Who is solely in existence to cut short your earthly term.
And life is strangely bitter and devoid of any hope,
All owing to this croaker with his maddening microscope.

—*Washington Star.*

CHRONIC ECZEMA.—

R. Aloini gr. $\frac{1}{2}$.
Tinet. nucis vom.
Ext. hamamelis fl. aa gtt v.
Tinet. gentianæ comp. fl. \bar{s} j.

M. Sig. Capiat haustus ter die.

Give an alkaline bath three times a week, composed of two handfuls of soda to twenty gallons of water, and apply the following ointment:

- R. Bismuthi subnitratiss 3 ij.
 Glycerini.
 Aq. calcis.....aa fl. 3 iv.
 Creosoti.....gtt. iv.
 Zinci carbonatis (impur.).....3 ss.

M.—*Shoemaker, Ex.*

HEMORRHOIDS. A writer in the *Nord Medical* gives the following ointment for hemorrhoids:

- R. Cocain. hydrochlor gr. 15.
 Ergotine..... gr. 60.
 Ichthyol..... gr. 65.
 Calomel gr. 45.
 Vaseline.
 Lanolin aa gr. 225.

M. Sig. A portion as large as a small nut to be inserted into the rectum after each evacuation.—*Canada Medical Record.*

CONSTIPATION IN INFANTS.—

- R. Tinct. nuc. vom m ss.
 Tinct. belladonnæ..... m j.
 Inf. sennæ m xx.
 Inf. gentianæ..... ad 3 j.

M. ft. haustus. Sig. To be taken three times a day before meals by a child from eight to twelve months old.—*Ex.*

DYSENTERY. The following prescription has been used with marked success in the Mandoli Regimental Hospital at Bhurtpore in cases of acute dysentery:—

- R. Quinin. sulphat..... gr. ij.
 Pulv. ipecacuanh..... gr. v.
 Ammon. chloridi..... gr. x.
 Tr. opii..... mxij.
 Aquæ, q. s. ad 3j.

M. Sig.: To be given every four hours.

LUMBAGO. The following mixture is often useful in some forms of lumbago:—

- R. Acidi salicylatis gr. x.
 Potassii iodidi gr. v.
 Ext. sarsaparill..... fl. 3ij.
 Aquæ, q. s. ad 3ss.

M. Sig.: To be taken in water thrice daily, after meals.

VAGINISMUS. Dr. Touvenaint advises the following:—

- R. Stront. bromid.,
 Potass. bromid.,
 Ammon. bromid., of each..... 3i4.
 Aquæ dest 3viij.

M. Sig.: Tablespoonful twice a day.

Or :—

- R Zinci valerianat. gr. 5-6.
 Quinin. valerianat. gr. iss.
 Ext. opii,
 Ext. belladonnæ, of each gr. $\frac{1}{2}$.
 M. et ft. pil. No. j.

Sig.: From three to six pills daily.

Locally :—

- R Ext. krameriaë gr. iss.
 Morphin. hydrochlor. gr. $\frac{1}{2}$.
 Ol. theobrom $\frac{1}{2}$ j.
 Ft. suppositoria vaginal.

Or :—

- R Cocain. hydrochlor gr. iij.
 Ext. belladonnæ gr. iss.
 Strontii bromid. gr. iv.
 Ol. theobrom $\frac{1}{2}$ j.

M. et ft. suppos. vaginal. — Journal of the American Medical Association.

INGROWING TOE-NAIL. •For that very painful affection, ingrowing toe-nail, the following treatment is very strongly recommended by Dr. Kinsman in the *Columbus Medical Journal*.

1. Remove all pressure from nail by cutting away a piece of the shoe.
2. Disinfect with hydrogen dioxide until no more "foam" appears.
3. Apply a drop of strong solution of cocaine in the base of the ulcer.
4. Apply a drop of Monsell's solution to the ulcer, then cover loosely with gauze. Repeat this process every second day until the edge of the nail is released by the retraction of the hypertrophied tissue. The patient suffers no pain from the application, and all pain has disappeared the second day. The cure is effected in a week or two without inconvenience or interference with business.

POINTS IN SURGERY. The following "catchy phrases" are from the pen of Dr. William V. Morgan, of Indianapolis :

1. A soft chancre burneth away fast.
2. An uncut felon should be considered a felony.
3. For lacerated perineum septic repair is worse than neglect.
4. "Milk fever" belongs to the suckling stage of obstetric practice.
5. "Delayed shock" means either hemorrhage or sepsis; decide quickly and act boldly.
6. The golden rule for the passage of urethral sounds or catheters is, "Begin with the larger size."
7. Prolapsed funis calls for podalic version. Funis repositors should be left in repose. Delay means death.
8. Chloroform given near an open flame is likely to be decomposed into irritating and poisonous vapors.
9. In cases of obstruction of the bowel, with stercoraceous vomiting, lavage of the stomach, both before and after surgical interference, will greatly enhance the patient's chances of recovery.

10. One thing about which it is good to be "cranky" is adherent prepuce. Let no such pathologic condition escape you unrelieved. In convulsions of children, male or female, the prepuce should always be examined. Ten good digits in two good minutes suffice to overcome the resistance of the most adherent prepuce that was ever hung to a boy.

11. A 10 per cent. solution of antipyrine is a sovereign remedy for vesical hemorrhage. From four to eight ounces may be allowed to remain in the bladder for thirty minutes.

12. Don't be too quick to promise a perfect result after dislocation at the shoulder. The circumflex nerve passes closely around the surgical neck of the humerus, and often takes serious and lasting offense at the traumatism. Paralysis of the deltoid prevents abduction of the arm, permits gradual elongation of the capsular ligament, and recovery from it is usually slow and incomplete; hence the wisdom of a lagging prognosis.—*The Atlantic Journal-Record of Medicine.*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion : Established 1867.

Published on the 15th of each Month.

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EDITORIAL.

A SERIOUS CHARGE AGAINST TORONTO CORONERS

The Undertakers' Gazette (Nov., 1900), contains an article which reflects in the most serious manner on the honor of the coroners of Toronto. It reads as follows:—"There is an undertone of dissatisfaction among some of the undertakers of Toronto over the fact that the coroners are not above accepting a bribe, and many of *the profession* (italics are ours) are not above giving one. An instance was cited to us only the other day where a coroner came to one of the leading undertakers and in a very suave manner indicated his willingness to hand cases over to him for about five dollars a head. We will not repeat verbatim the reply he received, but, although rather forcible, it was little more than he deserved. Bribery is bribery, no matter where or under what circumstances it occurs, and the undertaker who countenances this kind of thing is just as much a rogue as the coroner who accepts the money. The very fact that there is such fear evidenced on the part of those who follow this practice that anyone will find it out is proof enough of what they them-

selves know it to be. Some indulge in this kind of bribery on a wholesale scale, and include, beside the coroner, nurses, doctors and anyone else whom it is possible to place in the category. It is certainly time some pronounced effort was made to put a stop to such proceedings not only in justice to the honest undertakers but also to the public generally."

It is little less than an outrage that an unsupported general charge of this sort should be made against any body of men. If any coroner has been guilty of such unprofessional and altogether reprehensible conduct, he should be publicly exposed, and the authorities should remove him from the position which he has disgraced. That the charge as applied to the coroners of Toronto, as a class, is absolutely false and without foundation, no one who knows the professional reputation and standing of many of these gentlemen, will for a moment doubt. We sincerely hope that some action will be taken by them to have the evidence upon which such an accusation is made thoroughly sifted. They owe it, not only to themselves, but also to their professional brethren and to the public, that the matter should not be passed over without the fullest investigation. It is surely humiliating to the medical profession that they should be lectured on matters of honor and ethics by members of the undertaking trade. That bribery, on a wholesale scale, has been indulged in, is only conceivable on the ground that the complainants are very willing, not to say anxious, victims. It is, indeed, rare that honest men are insulted by the offer of bribes.

SPINAL ANAESTHESIA.

During the past month medical journals on this continent have devoted much space to the discussion of the subject of spinal subarachnoid injections of cocaine for surgical anæsthesia in operations beneath the diaphragm, with the result that the limitations of the usefulness of this method are becoming pretty well defined. The number of cases in which it has been used has multiplied rapidly, with a remarkable absence of fatalities so far reported, although it has been freely hinted that these have been more frequent than reports of cases would indicate. The method has many obvious disadvantages and is quite unlikely to revolutionize anæsthetic methods to the extent predicted by some enthusiasts. Cocaine is a notoriously unsafe and uncertain drug, minimal doses often producing the most alarming symptoms. The onset and duration of the anæsthesia are both uncertain, and in many operations the necessity for a second injection would not only be inconvenient but practically impossible. The unconsciousness of the patient and consequent absence of

mental distress is one of the greatest boons of ordinary general anaesthesia, so that one advantage which has been claimed for spinal anaesthesia is probably a most undesirable feature. The injection itself even with experienced operators, is sometimes a tedious and difficult matter. The disagreeable, not to say alarming, after-effects, and the dangers to which the spinal cord itself is necessarily exposed, will cause conservative practitioners to go slowly in the adoption of the method. The article by Dr. Corning, of New York, (*N. Y. Medical Journal*), who really discovered the method some fifteen years ago, makes one of the most thoughtful, modest and conservative estimates of the value of spinal anaesthesia we have yet seen. It would be well for those, who have had no experience with the matter, to give heed to the teaching of the discoverer.

A MEDICAL CO-OPERATIVE SUPPLY ASSOCIATION.

The prospectus of "The Physicians' and Surgeons' Supply Association, Limited," an organization with an authorized capital of \$100,000, officered and controlled entirely by members of the Medical profession, has just been issued. The scheme evidently has the endorsement and active support of influential members of the profession, the list of provisional directors including some of the best known physicians of the Province. The headquarters of the Association are to be in Toronto, and stock, not exceeding \$500 each, is to be allotted only to physicians and surgeons in active practice, so that any profits in the business will revert to members of the profession. The aims of the Association are well set forth in the prospectus, "the cardinal principles and essence of the movement," it is stated, "being professional co-operation for professional advantages." The supply house of the Association is to open in Toronto for business on January 1st, 1901. The success of this organization will be watched with much interest by the profession. Similar associations in England and the United States have been well received, and have become firmly established. That there is, in existing conditions, ample justification for such a departure, there can be little doubt. The Medical profession has too large a following of commercial parasites that feed by turning to their selfish interests the results of their self-sacrificing labors for the advancement of medical science or the relief of suffering. Whether such associations as this will help to obviate the difficulty remains to be seen. Any legitimate and sincere attempt with that end in view, however, is sure of generous support.

THE ANNUAL BANQUET OF TRINITY MEDICAL COLLEGE.

The annual banquet of Trinity Medical College was held November 15th at the Temple Café. Trinity Medical College has held twenty-three annual dinners, many of them elaborate, and all enjoyable, but none quite so admirable as this the last one of the century. Programme, music and catering were all that could be desired.

The banqueting hall was beautifully decorated, one of the most striking features being the arrangement of the tables, which were spread out in the form of a Union Jack. The Trinity College Colors were arranged in the centre of the tables, with single and clustered candelabras, palms, chrysanthemums and cut flowers giving a most artistic effect. Almost every portion of the walls was hidden from view with large streamers of red, white and blue bunting, intermingled with the College colors. The president of the Dinner committee, Mr. S Johnston, ably filled the chair.

Among the guests present in addition to the Faculty were: Hon. R. Harcourt, Mr. A. Pattullo, M.P.P., Rev. Prof. Clarke, Rev. Provost Street-Macklem, Dr. McKay, M.P.P., Surgeon Lieut.-Col. Ryerson, Dr. O'Reilly, Rev. Dean Rigby, Dr. R. B. Nevitt, Mr. Walter S. Lee, Mr. A. MacMurchy, Principal Embree, Prof. Wilmott and many others, including representatives from sister institutions.

The chairman, in proposing the toast to the Queen, alluded to the outburst of patriotism over all Canada at the outbreak of the South African war, and referred to the Trinity Undergraduates, Anderson, Farrell, Macdonald, Irving and Robertson, who had gone to the front. Hon. R. Harcourt, the Minister of Education, replying to the toast of "Canada and the Empire," spoke of the nobility and generosity of the medical profession. Mr. A. Pattullo also suitably responded to this toast. Dr. McKay, M.P.P., predicted a brilliant future for his Alma Mater,

UNIVERSITY OF TORONTO MEDICAL FACULTY DINNER.

The Fourteenth annual banquet of the Medical Faculty of Toronto University, held in the University Gymnasium on the evening of December 6th was one of the most successful and enjoyable in the history of the institution. Among the guests were: Rev. E. B. Macdonald, Dr. W. P. Cavan, Dr. O'Reilly, Prof. W. R. Long, Rev. J. R. Teefy, Dr. Ellis, A. E. Kemp, M.P., Dr. Peters, J. K. Kerr, Q.C., Walter S. Lee, Prof. G. M. Wrong, Mr. Cameron, Dr. Kitchen, Dr. Reeve, Dr. Parkin, Hon. Justice Moss, Dr. J. F. W. Ross, Hon. George W. Ross, Dr. Oldright, Dr. Britton,

Dr. McPhedran, Hon. Justice Rose, Sir John Boyd, Dr. McKinnon, Dr. Primrose, Dr. Jordan, James Brebner, Dr. J. J. McKenzie, Dr. Clark, Prof. Ramsay Wright and Dr. Bruce.

Much regret was expressed by the chairman at the unavoidable absence of Dr. A. H. Wright through illness, from which however he was glad to learn he was recovering. The usual toasts were heartily proposed and responded to.

WESTERN MEDICAL COLLEGE.

The Annual Banquet of the Western Medical College was held at the Tecumseh House, London, on Thursday evening, December 13th. Mr. A. F. Grant presided and Mr. W. F. Ball acted as secretary of the dinner committee.

TORONTO POST GRADUATE SOCIETY.

The officers of the Post Graduate Society for this year are: Hon. President, Dr. H. A. Bruce; Hon. Vice-Pres., Dr. J. T. Fotheringham; President, Dr. A. T. Stanton; Vice-President, Dr. F. W. Marlowe; Secretary, Dr. A. J. G. Macdougall; Executive Committee, Drs. Parry, Stubbs and Dittrick.

The Executive hope to keep up the good record of their predecessors and to introduce into the meetings more of the practical than heretofore.

PERSONAL.

Dr. A. H. Wright, who has been seriously ill with septicaemia, is now on a fair way to recovery, a matter of much satisfaction and pleasure to his medical friends.

Dr. Chas. A. Page, Trinity '98, formerly resident assistant in the Toronto General Hospital, and now practising at Castleton, Ontario, was married on December 13th to Miss Tudhope, of Toronto.

Owing to increased work at his private hospital and in order to devote more time to clinical research in his laboratory, Dr. Campbell Meyers has given up his Simcoe street office for the present, and may be consulted at his hospital, Deer Park, from 10 a.m. to 1 p.m.

CORRESPONDENCE.

ELIMINATIVE AND ANTISEPTIC TREATMENT
OF TYPHOID FEVER.

To Editor of "CANADA LANCET":

DEAR SIR,—In the reported proceedings of the Canadian Medical Association meeting published in the LANCET there appears under the heading of "Eliminative and Antiseptic Treatment of Typhoid Fever" a brief abstract of my paper. I had in that paper protested against the misrepresentation I had received in certain quarters. Your reporter furnished an apt illustration of what I complained of, and in this short abstract has managed to distort and misstate what I said to an extraordinary degree. For example, I am reported in this abstract as holding "the opinion that the drainage from the intestinal wall following upon the action of a purgative, such as calomel and magnesium sulphate, would tend to get rid of some of these bacilli in the *intestinal walls*, but would not effect their exit from the liver, etc."

I had in the first part of my paper quoted from the recently published Gullstonian lectures, delivered before the Royal College of Physicians of London by Dr. P. Horton-Smith, on "Typhoid Fever and the Typhoid bacillus," to show the correctness of my contention of seven years ago that the specific bacilli were present in the intestinal contents during the first days of the fever—not absent from the intestinal contents as has been asserted—and consequently that the soundness of my theory of their being swept out by the action of purgatives, thus limiting the infection of the body and of the glands in the intestinal walls, became perfectly obvious. Then followed the paragraph referred to, which I shall quote in its entirety.

"Elimination must not be confined to simply clearing out the intestine, but must apply to a much wider process; the clearing of poison from the body by way of the intestine either in the toxic bile or contained in the serous fluid poured from the intestinal wall.

"It is amusing after having made so many explicit statements and having drawn attention so many times to this feature to find Prof. Osler gravely pointing out to his readers 'that, unlike cholera, the typhoid bacilli are not confined to the intestine, but are to be found in the spleen, intestinal glands, etc., and consequently that they cannot be dislodged by the use of purgatives.'

"I shall again be explicit in the statement that the eliminative plan of treatment does not contemplate removal of bacilli from the spleen, intestinal wall and various tissues of the body, but does contemplate *elimination of bacilli and poisons from the intestine and of toxin from the body by way of the intestine.*"

A second example: I am made to say that I had never had a fatal hemorrhage and that I had had but few perforations. What I did state, after pointing out that twenty per cent. of the mortality of typhoid fever had been attributed to perforation and hemorrhage, was that "in my own experience I had never had a *fatal hemorrhage* and but few hemorrhages, nor had I in all these years a *single perforation*."

I am sure you will agree with me that it is most unfortunate when mistakes like the above occur, utterly false impressions are received by an immense number of readers, and it frequently happens that this impression remains since many who have read the report will fail to notice the correction.

171 College Street, November 1st, 1900.

W. B. THISTLE.

BOOK REVIEW.

A MANUAL OF OTOTOLOGY.

By Graham Bacon, A.B., M.D. Second edition. One 12mo. volume, 422 pages, 109 engravings and three colored plates. Lea Bros. & Co., New York and Philadelphia, 1900.

This 2nd edition is published within two years of the 1st. The present edition gives extended consideration to the Schwartz Stachie operations and to the use of the normal saline solution in intravenous injections, and increases the text by some 25 pages.

The size and efficiency of this excellent manual makes it a most useful book for the use of students, and the price places it within the reach of every one of these.—GIBB, WISHART.

IMPERATIVE SURGERY.

For the general practitioner, the specialist and the recent graduate, with numerous illustrations from photographs and drawings. By Howard Lilienthal, M.D., Attending Surgeon to Mount Sinai Hospital, New York City. The Macmillan Co., New York. \$4.00.

By those to whom the author appeals this book will be much appreciated. It deals only with the diagnosis and treatment of conditions which demand immediate operative measures and it presupposes the absence of a surgeon and the impossibility or inexpediency of removing the patient or of waiting for expert assistance. In carrying out this plan the author has been careful not to crowd the minuteness of detail so essential to those unaccustomed to the daily routine of surgical technique, nor does he spend time in discussing the pros and cons of the various procedures, but chooses in most instances one method, describing it in detail, and where the text can be elaborated introducing illustrations taken from work in his own practice.

This makes a very practical volume of 386 pages clearly printed on heavy paper with over 150 illustrations. The early chapters devoted to the choice and preparation of instruments and dressing materials and the preparation of the dwelling room for operation will prove especially valuable, while the chapters devoted to the more acute surgical emergencies are full of all essential detail.

The claim in this work is its simplicity and practicability.—C. J. C.

THE MEDICAL NEWS VISITING LIST FOR 1901.

Weekly (dated, for 30 patients); monthly (undated, for 120 patients per month); perpetual (undated, for 30 patients weekly per year); and perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60, patient perpetual consists of 246 pages of blanks. Each style is one wallet-shaped book, with pocket, pencil and rubber. Seal grain leather, \$1.25. Thumb-letter index, 25 cents extra. Philadelphia and New York; Lea Bro's & Co.

The Medical News Visiting List for 1901 represents the most complete, compact and useful form of what is now regarded as an essential convenience to the busy practitioner—a good visiting list. It contains, besides blanks adapted to all the routine of ordinary practice, 32 pages of the most useful and carefully selected text, furnishing information of value in emergencies, etc. It is handsomely gotten up and altogether will be found entirely satisfactory.

PATHOLOGY AND MORBID ANATOMY.

By T. Henry Green, M.D., F.R.C.P., revised and enlarged by H. Montague Murray, M.D., F.R.C.P. Ninth American from ninth English edition. Edited by Walter Martin, Ph.B., M.D. Lea Bro's & Co., Philadelphia and New York.

The appearance of a new edition of this work in so short a space of time proves that it has lost none of its popularity as a text-book. On account of its conciseness and dogmatic teaching it will always be a favorite with students.

This edition has been thoroughly revised so as to bring the subject matter up to date and nearly half the volume has been re-written by its English editor. The text has in many places been re-arranged, several new sections have been added and one hundred and eighty new illustrations. Dr. Mott has written the chapter on the nervous system, which greatly enhances the value of the volume. The American editor has added sections on malaria, the blood and a brief chapter on the preparation and staining of tissues for microscopic study.

The work more than ever fills the place which demands it.—C. J. C.

A TREATISE ON DISEASES OF THE NOSE AND THROAT.

By Ernest L. Shurly, M.D. 744 pages, with 6 colored plates, including 34 drawings and 223 illustrations. D. Appleton & Co., New York, 1900.

Where so many books are issuing from the press, devoted to diseases of the special organs, the reading medical public has a right to demand that the appearance of a new work shall have a *raison d'être* sufficient to justify its appearance.

The present volume is especially strong in the matter of "history," and the marshalling of the views of investigators and observers is excellent and indicates years of careful and diligent reading on the part of the author. We would have preferred to find in it a larger amount of the author's own personal observations on diagnosis and treatment. For the

average student the subjects are treated at too great a length. It is worthy of note that the author advocates the local treatment of diphtheria by antiseptic douches applied with a syringe,—the post nasal syringe in nose cases, and in severe cases by swabbing with Loeffler's solution. A thorough local treatment with a view to check the toxæmia by attacking the seat of the generation of the poison. He also advises hypodermic injections of muriate of quinine in secondary poisoning in diphtheria. The illustrations are excellent—those which are colored being chiefly from the well known plate of Grünwald.

We cannot understand why Dr. Shurly makes use of such an illustration as No. 31, p. 41, as it is anatomically incorrect and impossible.

GIBB WISHART.

MUSSER'S DIAGNOSIS. NEW (4th) EDITION.

A Practical Treatise on Medical Diagnosis. For the Use of Students and Practitioners. By John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania, Philadelphia. New (4th) edition, thoroughly revised. In one octavo volume of 1104 pages, with 250 engravings and 49 full-page colored plates. Cloth, \$6.00, net; leather, \$7.00, net; half morocco, \$7.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York. October, 1900.

This well and favorably known work has not reached its fourth edition undeservedly.

Every one of its eleven hundred pages, is filled with useful and essential information and in perusing them one cannot but feel that the time when medicine will be included amongst the exact sciences is fast approaching. The first half of the book is denoted to general diagnosis; here the author discusses the various symptoms of disease, their etiology, means of recognition and the relation they bear to diseases of special organs or systems.

In the latter half the author discusses, very fully, the special diagnosis of diseases of the various organs of the body. Throughout the work much prominence is given to the various chemical and mechanical aids to diagnosis and the laboratory and its methods and technique are kept well to the front.

The engravings and colored plates are well executed and the whole work reflects much credit on the publishers.—F. F.

A WAIL OF DISAPPOINTMENT.

An Eastern concern, which makes an imitation of Gude's "Pepto-Mangan," and, for years, has traded upon the reputation which this preparation has earned for itself, has recently sent broadcast to the medical profession of America a circular letter, in which, after bewailing the enormous returns brought by the "unethical methods" of other manufacturers, modestly refers to its own "ethical" virtues, and expresses the belief that, in spite of present non-appreciation of these virtues by the doctors, "the day will come when physicians will realize the importance

of ceasing to be the *instigators and propagators* of the popularity of certain proprietaries" and will patronize "*ethical preparations*"—like *theirs*, for instance.

This, to say the least, is a very left-handed compliment to the great body of the medical profession, who will not be slow to catch its drift, or fail to enquire wherein consists the "ethicalness" of the methods of the concern who thus sharply takes them to task for preferring a genuine to a spurious article.

Druggists, as a rule, are not much interested in the quibbles of the doctors on questions of "ethics," but in this matter most of them will recognize in the circular referred to, a wail of disappointment and an effort to draw attention away from the methods adopted by its authors to supplant the preparation thus covertly assailed by them with their own imitation thereof.

The time has gone by when either doctor or druggist can be deceived by any such false play. Every member of both professions knows that "Gude's Pepto-Mangan" is a preparation of genuine value, manufactured on scientific principles, by reliable men, and introduced to physicians in an ethical manner, solely on its merits, and for these reasons physicians will continue to be "instigators and propagators" of its popularity, just as the druggists will continue to keep in stock an article for which there is a steady demand and a ready sale.—*The National Druggist, St. Louis, Mo., November, 1900.*

HUNTER M'GUIRE'S OPINION.

The late Hunter McGuire, the most celebrated surgeon of his time in the United States, if not in the world, was asked for his opinion of Antikamnia by Dr. Thos. C. Haley, of Riceville, Va. Dr. Haley, in writing of this circumstance to The Antikamnia Chemical Company, says as follows:

"I recently wrote to Dr. McGuire and gave him my experience with Antikamnia in my own case and that of others. Of myself, I said that I had been using the five-grain tablets for four or five years consecutively and always with great and signal relief to my sufferings. I vouched for it as being the grandest succedaneum for morphia. While I entertained these opinions personally, I still felt that the quantity taken should be justified by consultation. Hence the letter to Dr. McGuire, and I am pleased to hand you herewith his reply."

The following is Dr. McGuire's reply:

St. Luke's Home, Richmond, Va., Nov. 8, 1894.

Thos. C. Haley, M.D.:

My Dear Doctor,—I don't see any reason why you shouldn't continue to take the remedy (Antikamnia Tablets) of which you speak and which has done you so much good. I don't believe it will do you any harm. With kind regards and best wishes. Very truly yours,

(Signed) HUNTER M'GUIRE.

Wemalta Food for Infants received the highest award at the Toronto Exposition.

SYP. HYPOPHOS. CO., FELLOWS

CONTAINS

The Essential Elements of the Animal Organization—
Potash and Lime ;

The Oxidizing Elements—Iron and Manganese ;

The Tonics—Quinine and Strychnine ;

And the Vitalizing Constituent—Phosphorus ; the whole
combined in the form of a Syrup, with a slight
alkaline reaction.

It differs in its effects from all Analogous Preparations :
and it possesses the important properties of being
pleasant to the taste, easily borne by the stomach,
and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the
treatment of Pulmonary Tuberculosis, Chronic Bron-
chitis, and other affections of the respiratory organs.
It has also been employed with much success in
various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant,
tonic and nutritive properties, by means of which the
energy of the system is recruited.

Its Action is Prompt : It stimulates the appetite and the
digestion ; it promotes assimilation, and it enters
directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy
and removes depression and melancholy ; *hence the pre-
paration is of great value in the treatment of nervous and
mental affections.* From the fact, also, that it exerts a double
tonic influence, and induces a healthy flow of secretions,
its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr.
Hypophos. FELLOWS" As a further precaution it is
advisable to order in original bottles.

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WHOLESALE AGENTS

MONTREAL

COMPOUND FRACTURE OF HUMERUS.

By T. J. BIGGS, M.G., Stamford, Conn.

Joe Pettig, Stamford, Slav; age 30; first seen September 29th, 1898. On this case of compound fracture of humerus resulting from a violent blow I was called in consultation by two professional brethren, and on account of the extent of the injury and the poor surroundings for nursing, I advised coming into the hospital, but this the patient refused, so the treatment and operation were carried out at his home. September 30th, assisted by Drs. Phillips and Hoyt, I cut down over the humerus, the incision extending from the insertion of the deltoid down to the lower end of the shaft. After reaching the bone a careful search was made for spiculæ, and six were removed. The wound was then thoroughly washed out and the bones were brought in apposition and drilled for wiring together. Instead of silver wire I used silkworm gut and brought the bones together in three places, fractures being just below the insertion of the deltoid, about the middle of the shaft. After separating the cavity with the bovine hydrozone reaction and Thiersh wash, and thoroughly drying it, a piece of plain bi-sterilized gauze was inserted and packed gently all around it at different points of fracture, carefully adjusted, and bovine pure was poured into the wound; then an ordinary bandage was placed over it. The arm was put up in an anterior-posterior splint, and dressed according to the method in fractures of the humerus. Over the dressing was applied a plaster of paris bandage, which was allowed to dry and a trap-door cut through it to admit the application of bovine which was made freshly every hour for the next forty-eight hours, just sufficient to keep the gauze within moist. At the end of forty-eight hours the gauze was removed and depuration and dressing repeated, with gauze packing, which was moistened with bovine as before once in two hours. After the next forty-eight hours all this was repeated again, and so on until October 10th when the gauze packing was discarded and bovine pure was directly applied, dropping it into the wound once in two hours and depurating over again twice in every twenty-four hours. On the 21st the plaster of Paris cast was removed and an ordinary tin splint was employed. By the 25th the bones had become firmly reunited and the strands of silkworm gut used to keep them together had been mostly absorbed and removed. The wound was now closed and dressed with bovine twice a day. On the 31st the wound was entirely healed, a light plaster of Paris splint was applied to give support to the arm, and the case was discharged cured.

Points of great interest in this case are the short time in which the bones thoroughly united and the wound healed, usually six weeks being required for ordinary transverse or oblique fractures to unite; while here and there were two or three points of fracture, and compound at that, yet the whole repair was completed in thirty-four days. From my experience in the treatment of this case with applied blood, I am convinced that if all fractures were treated by the open wound method, using bovine blood to hasten repair, no such thing as deformities or ligamentous unions need ever result.

THE CANADA LANCET

VOL. XXXIV.

TORONTO, JANUARY, 1901.

No. 5.

ORIGINAL ARTICLES.

AN HISTORICAL SKETCH OF CANADIAN MEDICAL EDUCATION.

By WALTER B. GEIKIE, M.D., D.C.L., Dean of Trinity Medical College, Toronto.

As the Province of Ontario was a wilderness at the time of the American revolution—much of it remaining in that condition for long afterwards—although now, the most populous and wealthy province of Canada, it is perhaps well to consider first the past history and present position of Medical Education within its borders.

During the last few years of the 18th century its population was very scanty, and the mode of living exceedingly primitive. Its people spent most of their time out of doors, engaged in the hard labour of clearing the dense primeval forest. As a rule they were as healthy as plenty of pure air and hard work could make them. Their need of medical aid was therefore neither frequent nor urgent, unless in case of accident. Some of the military medical officers whose regiments had served in Canada found their way to Ontario, which was then the far west. In course of time other doctors came over from Great Britain, and some from the recently formed neighbouring Republic, who met to some extent the medical and surgical wants of the early settlers. Doubtless, however, there were many sad cases of much needless suffering, and the loss of many valuable lives from the scarcity of medical men in those long past days, when many miles had often to be travelled over bad roads, and not seldom over mere paths, before medical help of any kind could be reached or given.

Necessity made the first settlers very self-reliant. Men, women, and children alike picked up what knowledge was obtainable from any of the old medical works they came across—very few and far between—and they even gathered what information they could from the Indians who in their own rude way did what was possible to relieve suffering. As the population increased, doctors, some well educated and others who knew but little, now and then came into the Province to practise. But for many years, and especially during the first half of the present century, the thinly settled parts of the Province were infested with ignorant

quacks who preyed upon the simplicity and credulity of the people under circumstances in which it was difficult, or impossible, to get more reliable assistance.

The earliest Medical Act affecting Canada was one passed in 1788 by the British Parliament. It provided that no one should practise Physic, Surgery, or Midwifery within the Province of Quebec (which then included all Ontario and a great deal more), or in the towns of Quebec and Montreal, without a license. Under this Act, the selling and distributing of medicine by retail, or prescribing for sick persons for gain without a license, was prohibited. The license was obtained by passing an examination conducted by capable persons appointed by the Governor or the Commander-in-Chief of the Province. All licenses granted to practise Physic, Surgery, Midwifery, or Pharmacy were ordered to be registered in the office of the Clerk of the Peace nearest to where the person licensed lived. Fines of £20 for the first breach of this Act, £50 for the second, and £100 and three months' imprisonment for each subsequent offence, indicate how stringent the law was intended to be. Probably the fines were seldom levied and still more rarely collected. University graduates in Medicine, and military or naval surgeons were exempt from its provisions.

Soon after the war of 1812, the first hospital was built in York (now Toronto), of which the present splendidly equipped and excellently managed Toronto General Hospital, and the other hospitals in that city, and indeed throughout the Province, may be regarded as the legitimate successors. In 1815 a Medical Act was passed for Upper Canada (now Ontario) having very similar provisions to those contained in the Act of 1788. At this time the number of medical men in the Province is said to have been about forty. The population was then small. What a contrast this presents to the present state of things with about 2,500 registered medical practitioners in Ontario!

In 1818 a new licensing Medical Act was passed. It authorized the appointment of a Board of Medical Examiners to examine all candidates for license. With a brief interval, this Board continued to exist for many years, and only finally discontinued its work when the College of Physicians and Surgeons of Ontario was called into existence in 1866. For a short time, from April, 1839, till July, 1841, it was in abeyance in consequence of the passing of an Act of the Legislature of Upper Canada incorporating the College of Physicians and Surgeons of the Province and conferring upon that body the duty of examining all applicants for license to practise medicine in the Province. This Act was disallowed by the British Government in December, 1840, on the representation of the Royal College of Surgeons of England, that it infringed the chartered rights of that college.

The Medical Board was then immediately re-appointed and resumed its duties in July, 1841. For twenty-five years longer it continued to hold its examinations regularly every three months, and did good service to the Province, its work being well and faithfully performed. Those candidates proved to be the wisest who prepared for their examinations long and carefully, for it was considered from early times to be a very good test of fitness to receive the Governor's license.

For several years before there was any regular medical school in Upper Canada—as early as during the "thirties," Dr. John Rolph, who is deservedly known as the "Father of Medical Education" in the Province, was in the habit of receiving pupils into his house in York (now Toronto) from various parts of the country, to whom he gave a very thorough medical education—which he was exceptionally well qualified to do. Born and thoroughly educated in England, he was one of the most highly gifted of the many prominent men of that day, who in various walks of life made Upper Canada their home. Although a member of the legal profession, having been called to the bar in London, England, and a member of the Inner Temple, he was also a favourite pupil of Sir Astley Cooper, and a member of the Royal College of Surgeons of England. He loved the medical profession dearly, and was never happier nor more at home than when teaching its various branches to the young men whose good fortune it was to have so able and interesting a teacher. Some of his early pupils subsequently became distinguished, and many still occupy high positions as medical teachers and practitioners.

The Rebellion of 1837, which interfered with this work, however its occurrence may be regretted, proved to be an event which did much good to Canada in bringing about the peace, happiness, and perfect freedom she has now for many years past enjoyed. Dr. Rolph, who was a Hampden in his love of political freedom, was, as may be supposed, one of the leading reformers of the time, and sympathized with the movement in which he became more or less involved. The attempt at armed rebellion having speedily and fortunately failed, some of its promoters were arrested, and others fled the Province. Dr. Rolph was amongst the latter, and went to Rochester, U.S., where he resided and practised his profession till, 1843, when the Canadian Legislature passed an act, of which he took advantage, permitting all exiles for political causes to return to Canada. Several Canadian students went to Rochester during his residence there in order to get the benefit of his excellent teaching.

Immediately upon his return to Toronto he resumed his favourite work, and formed a medical school which very shortly became famous, and did as good work in medical teaching as has ever been done in Canada. This school for many years bore the name of its respected founder. The late Dr. Joseph Workman, a man of great ability and an excellent and highly educated teacher, became, at Dr. Rolph's request, and continued for several years, his most energetic helper. The Medical School soon stood so high that its tickets were received everywhere, and its students were exceptionally successful in passing their examinations before the Medical Board. It may be interesting to recall here that when the number of students had increased so as to require more accommodation than an ordinary private house could furnish, the class-room first fitted up for them formed the end of a frame building in Dr. Rolph's yard. One part of this room had plain pine seats in it, ranged one above the other, while the table behind which, Dr. Rolph and the other lecturers sat when they lectured, was the vat in use for anatomical purposes. The rest of this room was provided with dissecting tables on trestles, and this constituted the dissecting room where a great deal of good dissection was

done for a number of years. Only a thin wooden partition separated this medical college part of the building from the rest of it, in which were comfortably housed Dr. Rolph's horse and cow. So thin was this partition that while the medical students were drinking in their scientific knowledge as they listened to the lectures, or were working at their dissections, the four-legged occupants of the very adjacent stalls, who cared little and thought less about anatomy, medicine, and surgery could often be distinctly heard heartily enjoying their more substantial material aliment.

Humble as this building was, and small as such a beginning may appear when compared with the finely built and well equipped medical colleges of to-day, teaching of a very high order was given in it, and with a punctuality, earnestness, ability and fulness, not to be surpassed, and which is not now surpassed anywhere in Canada. True, since those days the study of medicine has greatly advanced—some subjects now being taught as separate departments, which were then comparatively unknown—but what at that time was considered essential to a good medical education, viz., complete instruction in anatomy, physiology, materia medica and therapeutics, including the necessary knowledge of chemistry, medicine, surgery, midwifery and diseases of women and children, was there exhaustively given. It is indeed a question whether to-day the young men studying anatomy in any of our schools are better, or in most cases even as good anatomists as were the students of those days, although the latter did all their work in so primitive a college building, and were not allowed the use of illustrated books or plates to any extent, but were obliged to study and trace out for themselves every part, great or small, of the human body, and were constantly and thoroughly examined in their work as they did it.

Dr. Rolph himself never neglected this latter essential part of a student's training. Speaking of the founding of his school in an Annual Announcement issued a good many years later he says that his School of Medicine was founded in 1843, and incorporated by Act of the Legislature in 1851, so that this school was really the first medical teaching body established in Upper Canada, and it was from the first entirely self-supporting. In the summer of 1850 a great advance was made by this medical school. Dr. Rolph, at his own expense, built a new brick building adjoining his house on Queen St. West, the north side, a few doors west of Teraulay St. The upper part of this building was reached by a stair leading direct from the street, and consisted of two large rooms, one of these being nicely fitted up as a lecture-room, and the other as a museum. The latter had on its walls, and on both sides of a special arrangement which extended from one end of the room to the other, a very large number of carefully prepared anatomical specimens—the work of industrious, painstaking students. These preparations made the museum attractive and very useful to the more studious members of the medical classes. At the same time, the old Sunday School building of Richmond St. West, on the Knox Church property, and then as now owned by that church, was rented and fitted up by Dr. Rolph as a second lecture-room. Half of this building is still standing, and may be easily seen inside a high fence, just

opposite the Methodist Book Room. Some of the medical lectures were delivered in the Queen St. lecture-room and some in that on Richmond St., and the students had a short walk and some fresh air in going from one to the other. The old dissecting-room in the yard of the Queen St. house was still used, and did good service for some time. After these changes, which in themselves indicated prosperity, the school suffered for a short time from the withdrawal of Dr. Rolph, who re-entered political life and accepted a seat in the Cabinet in 1851. He returned to his college duties with great pleasure in 1855.

The Toronto School of Medicine, as Dr. Rolph named it. In 1854, by arrangement with the Board of Victoria College, the school became the medical department of that university—it being considered that such an arrangement would be mutually advantageous. The connection of the Medical School with this institution, while adding to the prestige and influence of the latter, would enable students who desired to do so, to proceed to their degrees in medicine instead of taking only the license of the Medical Board as heretofore. In 1856 a large building, formerly used as a church on "Little Jarvis St., Yorkville" (now No. 10 Bismarck Avenue), was purchased and fitted up for the newly-formed "medical department," and for a good many years afforded ample accommodation and every facility for medical teaching in the many subjects students have to study. ✓

Some difference in connection with the school arose between Dr. Rolph, who was the Dean of the Faculty, and his colleagues, soon after these changes had taken place. Most of his colleagues had been educated in medicine chiefly, and some solely, by himself. The Victoria College Board supported Dr. Rolph on its being appealed to in the matter. On this account his colleagues resigned in a body just the day after the opening of the session of 1856-7. The University authorities promptly accepted the resignations which had been sent in, and directed the Dean, as the responsible head of the department, to fill the places of the gentlemen who had retired, as well and as speedily as he could. Although placed in an exceedingly difficult position, the Dean proved himself quite equal to the occasion. During the little more than two weeks it took him to complete new arrangements for carrying on the work of the session, Dr. Rolph alone, kept everything going on in the college. He lectured during this period four or five times every day on the various subjects to the entire satisfaction of the students, who, with hardly an exception, stood by their able teacher and Dean. ✓

The high character of the Dean's teaching during this time made it even more difficult, than it would otherwise have proved, for the new professors whom he called to his aid, and appointed to fill the vacancies. At this time the writer was appointed Professor of *Materia Medica and Therapeutics*, to which chair the duties of another were very soon added, viz., those of *Midwifery and Diseases of Women and Children*; a large burden with which to begin, with no special preparation, the responsible duties of medical teaching. With further and very willingly rendered help, the session was successfully completed.

Throughout Dr. Rolph's Deanship, which lasted till 1870, this Medical School was singularly prosperous. He at first continued to use the

name as advertised when the arrangement with Victoria College was first entered into, which was "The Toronto School of Medicine—the Medical Department of Victoria College." The professors who had resigned, as they constituted a majority of the members of the Corporation of the "Toronto School of Medicine," lost no time in renting a building from the University of Toronto, in which they established themselves under the old name of "The Toronto School of Medicine." They soon applied for an injunction to restrain Victoria College and Dr. Rolph from continuing to use the name of "The Toronto School of Medicine." The decision of the Court was adverse to the Victoria College and Dr. Rolph (who acted as his own counsel), and the injunction was granted on the ground that, as "The Toronto School of Medicine" was a corporate body, no arrangement such as that alleged to have been made by "The Toronto School of Medicine" with Victoria College could be legally entered into without an Act of the Legislature authorizing the School to make such an arrangement, and that, as this had not been done, the arrangement made was legally null and void. Unquestionably neither of the parties interested had thought of such a thing being necessary when the arrangement was entered into.

This decision was of no moment so far as Victoria College and Dr. Rolph were concerned. The students and the general public knew well that "Rolph's School," as it was called, was wherever Dr. Rolph was teaching, and the Medical Department of Victoria was thereafter advertised as such, with the addition of the words, "Commonly known as Rolph's School," which answered every purpose. From year to year, with the Dean at its head, this Medical Department steadily grew in public favour—year by year, and was for years the most largely attended Medical College in Canada. At length in 1870, having become somewhat feeble from age (being then in his 78th year) he resigned his position. His resignation was sent in just when it was, because some of his colleagues thought it right, notwithstanding his decided wishes to the contrary, that an "Assistant Dean" should be appointed, and the College Board saw fit to carry this recommendation into effect, upon which the venerable Dean forthwith resigned. The writer, whose views were in full sympathy with those of Dr. Rolph, also resigned at the same time.

The Medical Faculty of Victoria, as then constituted, never recovered from the shock it received by the retirement of its honoured head, and of the other Professors who either retired with the Dean, or soon afterwards. It came to an end during the session of 1874-5. About three years before this time, the Faculty had received permission to sell the Yorkville College building, and had obtained a lot and erected a new building on Gerrard Street, near the General Hospital. The Faculty soon after this resigned, and, this new building came to be occupied by the Toronto School of Medicine which carried on its school there till 1887, when, having joined the Toronto University as its Medical Faculty it ceased to teach as a separate body. Toronto University's Medical Faculty now (1900) continues to use this building for final medical teaching purposes; its primary work being done in the buildings in the Queen's Park. The Toronto School of Medicine, although its charter is in abeyance, contin-

ues to send a representative to the Medical Council, although it has not carried on a Medical School in its own name since 1887. It also sends a representative to the Senate of the University of Toronto, which it joined thirteen years ago, and of which some of its surviving members still form a part of the Medical Faculty. The old school corporation therefore still legally exists.

During the fourteen years ending in 1870 this School and the Medical Department of Victoria under Dr. Rolph were the two rival Medical Institutions in Toronto. The Toronto School was in affiliation with Toronto University, as was also Dr. Rolph's Victoria School. The students of the latter graduated for the most part at Victoria University. In time many of the Toronto School Teachers became members of the Government Medical Board, of which Dr. Rolph was also a member, and a good deal of rivalry was not seldom manifested at its quarterly meetings. In course of time the Toronto School obtained power from the legislature to grant certificates which were equivalent to the Governor's license. Thus for some years while a number of the Toronto School students graduated at Toronto University, some went up before the Board for license, and others obtained the certificate of the School, after examination by its teachers. In 1866, however, great changes took place. In that year Dr. Parker's Bill was passed, which established a Medical Council. This body was further and more perfectly established by the subsequent Act of 1874 as mentioned in the later part of this sketch. When, in 1875, the Toronto School occupied the building erected by Victoria Faculty, on Gerrard Street, it became affiliated also with Victoria University, and its students took their degrees, some from Victoria and some from Toronto University, and some took both degrees.

In the early "seventies" Trinity Medical School, whose restoration and progress is given further on in this article, was in full blast. For some years it and Toronto School were keen but not unfriendly rivals. In 1874, however, the permanent establishment of a Medical Council and a Central Board of Examiners placed the various teaching and examining Medical bodies of Ontario exactly in the same position as regards obtaining a License to practise in Ontario, which the Medical Council alone has the power to grant after full examination. This has had the good result of largely depriving all rivalries which exist, of much of that bitterness which cannot be too strongly deprecated.

The Toronto University Medical Department. In 1844 the Medical Faculty of King's College (now the University of Toronto) had been first constituted. The building in which the lectures were first delivered was an unpretending frame one, close to the west wing of the old Legislative buildings on Front Street. Further accommodation was provided for the Faculty subsequently in these buildings as it came to be required. But at the first session the attendance was very small, consisting of two, or at the most three, matriculated students. But it increased from year to year. The Faculty consisted of Professors Gwynne, King, Beaumont, Herrick, Nicol and Sullivan, all well-known and highly respected Medical men in their day, who were considered good teachers of the branches they respectively taught. Each of the Professors was paid an annual salary

from the University funds ranging from £200 to £250 (\$800 to \$1000). The salary of one Professor, whose duties were lighter than that of his colleagues, was only £100 (\$400 Halifax currency) a year.

The Medical Faculty continued in operation and the attendance of students became larger as the years went on till 1853, when a change was made in the University Act under which Medicine and Law ceased to be taught in the University. This decision was reached by the Legislature of Canada, which had before it the experience of a good many years on which to form a judgment, and after the most careful investigation of the entire question as to the teaching of Law and Medicine by a State University, at very considerable cost to the public, this vote was given by the Legislature, all but unanimously—there being only two dissentients. The view held by the Legislature being that "State Institutions ought not to train men for the lucrative professions of Law and Medicine at the public expense, but should leave this to be done by private enterprise, that is, to self-supporting Institutions." Those who desire to enter such professions were properly supposed by the Members of the House, to be quite able to pay adequate fees for their training.

It was provided by the University Act of 1853 that candidates for degrees in Medicine and Law should be examined by examiners appointed annually by the University for that purpose. The chief reason why so few of the students, taught by the University Medical Faculty prior to 1853, took their degrees in Medicine at the University was the fact that as a general rule they went up before the old Medical Board of Upper Canada, whose license gave as full authority to practise as a University degree, while the latter was a good deal more costly. In 1887 a Medical Faculty was restored to the University by the Ontario Legislature (No. 149, 1st Session 6th Legislature, 50 Vic., 1887). The chairs were filled largely by the Faculty of the Toronto School of Medicine. Up to two or three years ago the members of the present University Medical Faculty were appointed every five years, and the Senate of the University is now its supreme governing body. The appointments on the Medical Faculty are not now limited as to time.

The Trinity School of Medicine. In June, 1850, Dr. Hodder and Dr. Bovell, after having carefully considered the subject, decided that the time was opportune to organize a new Medical School. They decided to call it the Upper Canada School of Medicine, and associated with themselves as its Medical Faculty, Drs. Badgley, Bethune, Hallowell and Melville. In November of the same year this Faculty tendered its services to the Bishop of Toronto, the Right Rev. Dr. Strachan, who had just returned from England, as the Medical Faculty of Trinity College, which latter Institution was being founded by His Lordship. The offer made was gratefully accepted, and on Nov. 7 the first session of the new Medical Department was formally opened in the Hall of the Mechanics' Institute, Toronto, with introductory lectures by the respective Professors. A large house on the west side of Spadina Avenue just north of Queen Street was fitted up for Medical teaching purposes, and there the first winter's course of lectures was delivered. This Medical School made from the first a very favorable impression from the popularity and ability of its

well-known Professors. Its success was great, and increased from session to session, but it was unfortunately destined to be comparatively short lived, as, owing to circumstances over which the Faculty had no control whatever, and which could not occur now, all the Professors resigned in 1856.

After the lapse of fifteen years, the Medical Faculty was re-established in the spring of 1871, free this time from the danger of a sudden collapse which had befallen the former Faculty, for it was established on a much broader and more liberal basis. The time chosen for the restoration proved to be most fortunate. Dr. Rolph and the writer, and very shortly afterwards Dr. Fulton, had withdrawn from Victoria College. Drs. Hodder, Bethune and Hallowell, members of the former Faculty, were still vigorous and glad to co-operate in the restoration of the Faculty in which years before they had taken so much pride, and had done such good work. There appeared to be a possibility of also securing Dr. Bovell's valuable assistance, although that gentleman had some years before gone into the Church, and was living in the West Indies. Dr. Beaumont, formerly Professor of Surgery in the University of Toronto, also agreed to accept a Professorship, although his health never admitted of his entering upon its duties. The following list of teachers is given in the Calendar for the winter session of 1871-2: Dr. Hodder, Dean, Obstetrics; Dr. Beaumont, Surgery; Dr. Bethune, Anatomy; Dr. Hallowell, *Materia Medica*; Dr. Geikie, Medicine; Dr. Fulton, Physiology; Dr. Covernton, Pathology; Dr. D. McLarty, Assistant in Surgery; Dr. Kennedy, Medical Jurisprudence; Dr. A. J. Johnston, Demonstrator of Anatomy and Surgical Anatomy. Chemistry and Botany were to be taught by the Professors at Trinity College.

When the time came for opening the session, Dr. Bethune had to teach Surgery, for the reason given above. He taught Anatomy as well, without assistance, for a time. Dr. H. Robertson was subsequently appointed to teach Anatomy, and Professor Ellis to teach Chemistry and Dr. C. W. R. Biggar, Esq., M.A., to teach Botany. Of the original Faculty Drs. Hodder, Hallowell, Bethune, Beaumont, Fulton, Robertson and Kennedy have since died, and Dr. Geikie and Dr. J. Algonon Temple are still (1900) in charge of their professorial duties. In April, 1871, soon after being constituted, the Faculty announced that examinations would be held at Trinity University in April of that year, at which candidates for the primary and final examinations might present themselves. A large number did so. This first graduating class numbered thirty. The first winter session opened with a good attendance, fifty-seven having entered. A building on Spruce Street had been erected during the summer, of good size and arranged in every way for Medical teaching purposes. The beginning of the School was considered as most encouraging, and its prosperity has been continuous from then till now.

In 1877, the Ontario Government, after much importuning, at length sanctioned a change long urged upon it by the Senate of the University of Toronto in the terms of the affiliation of all Medical teaching bodies with that institution. Up to that date, all of these in Upper or in Lower Canada, whether forming part of other Universities or not, were affiliated with the Provincial University by Statute. The chief change made in 1877

was, that thereafter no Medical teaching body which formed part of another University could continue in affiliation. Some of the Medical students of Trinity had gone up for examination to Toronto University, as was their right, and had succeeded in winning some gold and silver medals. It was said and believed by some at the time, that the change was sought for in order to prevent further competition of this kind in future. This action proved to be a very good thing for Trinity. It resulted in the Faculty applying for, with the consent of Trinity University, and obtaining, a special Act of Incorporation as an entirely independent Medical School under the name of Trinity Medical School (1877, Ontario Legislature). This Act gave the School power to hold property; to conduct Medical teaching; to appoint officers, Professors and Lecturers; to hold examinations and award honours. It gave it the right to affiliate "with any University or Universities," and all other privileges enjoyed by any other Medical School in Ontario, including representation on the Medical Council, and on the Medical Council's Board of Examiners.

The Act was afterwards amended by changing the name of the School to "Trinity Medical College." It occupies still the building in which it began to work, although this has been, at its own expense, largely added to as circumstances required from year to year. Its success has been pronounced. The annual attendance at its various classes continued for years at about from 250 to 300 students from all parts of Canada, the United States, and other countries. It is entirely self-sustaining, and never did better work than now. In the same year in which its Act was amended (1887) it was invited to join the Toronto School of Medicine, and leaving its independent charter in abeyance as that School had done, to become part of the University of Toronto when the Faculty of Medicine was restored to that institution. The invitation was unanimously declined, as the College preferred to remain under its own charter, as an independent body.

The Kingston Medical Faculty. For a brief outline of the history of the Medical Faculty of Queen's University, Kingston, I am indebted to a speech delivered by Dr. Fife Fowler, Dean of that Medical institution in Kingston in December, 1896. Early in the year 1854 the School seems to have been first formed under somewhat remarkable circumstances. A petition headed by Robert Douglas, a noble specimen of nature's gentlemen, was presented to Queen's College and the Medical profession of Kingston, praying them to establish a Medical Faculty in Kingston. The University responded favourably and promised all the aid and accommodation it could spare. It gave permission to the new Medical Faculty to retain all graduation and registration fees, in full confidence that the best would be done to advance the cause of higher education, while at the same time entailing no financial burdens on the University."

The Government of Canada, on application being made, and through the late Sir John A. Macdonald who was a staunch friend of the College, gave an annual grant to the Medical School at Kingston, absolutely refusing to give it to the University. By the receipt of this grant the Medical Faculty was enabled to erect the commodious building it now occupies. The Faculty as at first constituted was as follows: James

Sampson, M.D., Professor of Clinical Medicine and Surgery, and President of the Faculty; John R. Dickson, M.D., Professor of the principles and practice of Surgery; Horatio Yates, M.D., Professor of principles and practice of Medicine; William Hayward, M.R.C.S., England, Professor of Midwifery and Diseases of Women and Children; Fife Fowler, M.D., L. R. C. S., Edin., Professor of Materia Medica and Pharmacy, and last, although always first, John Stewart, L. R. C. S., Edin., Professor of Anatomy, and Secretary of the Faculty. Queen's Medical Faculty continues to prosper as the Medical Faculty of Queen's University, Kingston, and has many good men in the Medical profession.

The London Medical Faculty. In 1878 Bishop Hellmuth obtained the charter for the Western University. He approached several Medical men in London, Ontario, on the subject of forming a Medical Faculty, and in 1880 a meeting was held to discuss the matter, but nothing was done till 1882 when the Faculty was organized as follows: Dr. C. G. Moore, Dean; with Drs. J. M. Fraser, Bucke, Eccles, Arnott, J. S. Niven, W. Waugh, J. Wishart, W. H. Moorehouse, and J. A. Stevenson (Registrar). On the 1st of January following the class numbered five. In the year 1896-7 seventy were in attendance. The Faculty has been greatly enlarged and considerably changed since it began its work. The present Dean is Dr. W. H. Moorehouse, an old graduate of Trinity, to whom I am indebted for these facts. The success of this College so far has been quite encouraging.

The Ontario Medical College for Women. This is now the only one of its kind in Canada. It was established in Toronto in 1882, mainly through the persistent efforts of Dr. Michael Barrett, who was appointed its first Dean. In 1894 it was placed upon a more permanent basis, a good College building having been erected for its accommodation. Its name too was duly authorized by law. During the first session it had but two students. It is now, after fifteen years, well equipped and has a list of fifty graduates and sixty registered students. It is affiliated with Trinity University and with the University of Toronto, and is entirely self-sustaining.

McGill University Medical Faculty. Turning to the Province of Quebec we find that the McGill University Medical Department had, like all the Ontario Colleges, a very humble beginning. In 1822 four of the members of the acting staff of the Montreal General Hospital, Drs. Robertson, Caldwell, Holmes, and Stephenson, having talked over the matter together, considered it very desirable, indeed imperatively necessary, that there should be a School of Medicine established in Montreal. They thought that it would be well to take for its model the Medical Faculty of Edinburgh University, and have it connected with the Montreal General Hospital, as that of Edinburgh is with the Royal Infirmary. In accordance with this plan the Montreal Medical Institution was organized in 1824 in a small building which stood on part of the present site of the Bank of Montreal. The first class consisted of twenty-five students, and the four gentlemen just named did the entire work of the winter session. These energetic men, who did all the teaching and did it well for years, found it up-hill work; however, they secured the recog-

dition of their School in Edinburgh, which was one decided advantage. In 1829-30 it began the session for the first time as "the Medical Faculty of McGill University" with an attendance of thirty students. Although for years its growth was hardly preceptible, yet as part of a chartered University, it worked its way under great difficulties.

As in Upper Canada, so in the Lower Province (now Quebec), the Rebellion interfered a great deal with Medical education. So much was this the case that the McGill Faculty had to close its doors for three years. In 1839-40 with a class of twenty-eight, two smaller than the class of ten years before, it resumed active work and soon obtained full recognition in Great Britain. Death, by the year 1844, had left only one of the four original promoters of the School—Dr. Holmes. The best successors who could be found were appointed in place of those who had passed away, and the Faculty was strengthened by many additions. In 1851 a good building was erected on Cote Street, and accommodated the Medical classes very well, giving the School the advantage of a more central position than it had heretofore occupied. There it remained for twenty-one years. Dr. Holmes was the first Dean of the Faculty, and was appointed to that position in 1854. By 1866 the attendance had increased to 184, and in 1896-7 had reached the high figures of 400 students. The growth of this department in recent years and its ample endowment by private beneficence is well known to all interested in Medical education. The success attained by it is the reward of much devotion to duty, and great energy in the prosecution of the work during many years, when the toil was very great, and the remuneration of the toilers exceedingly small.

(Concluded in the February issue.)

A CASE OF TUBERCULAR MENINGITIS WITH RECOVERY.

Reported by DR. P. L. SCOTT from service of DR. J. T. FOTHERINGHAM, in Hospital for Sick Children, Toronto.

N. D.—Admitted May 14th, 1900; age when admitted, 3 years, 3 months; temperature, $99\frac{1}{2}$; pulse, 118; respiration, 28.

Family History.—Father, mother, four brothers and sisters, living and healthy.

Previous History.—Pneumonia when a year old. Had measles two months before admission, general health had not been good for a year past. Complained of pains in the legs and especially in the left hip; no history of lameness could be obtained.

Present illness.—About May 1st patient was struck by a stone on the side of the head but seemed none the worse for the blow. Ten days later he complained of pains in his legs and of feeling very tired. Next day, May 11th, he complained of frontal headache and seemed feverish and drowsy. On May 12th it was noticed that his head was retracted. On the 13th and 14th he vomited several times and seemed more drowsy but would awaken up screaming with the pain in his head. His appetite failed with the onset of the acute illness, the bowels were regular. There was a slight cough. Examination on admission showed marked opistho-

tonos with tenderness of the cervical muscles. The pupils were equal, reacting to light. Dr. Reeve was kind enough to examine retinæ and could find no tubercle nor other lesion there. The abdomen was somewhat distended, Kernig's sign was present. A possible tuberculous focus was found in the base of the left lung.

During the first fortnight there was no marked change in his condition. He cried a great deal from pain, some times lying quiet, some times screaming. The temperature was extremely irregular, ranging from 96° to 104°, sometimes up at night and down in the morning, sometimes the reverse. There was a good deal of constipation and a progressive emaciation. At the end of the fortnight a marked convergent strabismus developed and the pupils reacted sluggishly to light; the pain in the head was more severe.

During the second fortnight there was more stupor and less pain. The pulse and respiration were irregular, *the extremities often cold*. The temperature became less irregular and toward the end of the fortnight was subnormal, remaining so for several days. The strabismus disappeared. The patient now lay on his right side with the head retracted. He slept a great deal but cried frequently from pain which he located in the back of the head. When he slept the eyes were partly open, the pupils equal and slightly dilated, the eyeballs rolled up showing the sclerotics.

During the third fortnight there was no change of importance. He ground his teeth frequently when sleeping. Occasionally he complained of pain in various parts of the body, *e. g.* arms and right hip. The temperature for the most part was about normal. There was less pain.

For a week or two longer no change was noticeable and then a gradual improvement in the condition became manifest. At first hardly perceptible it became more rapid from week to week and by the middle of August—twelve weeks after admission—the patient was able to sit up in bed and to move his head freely from side to side. At the present time he seems perfectly well.

In presenting this case I desire to acknowledge the valuable services of Dr. P. L. Scott, late acting House Surgeon in Hospital for Sick Children. In summarizing the history, the points in favour of a diagnosis of meningitis are:

- (a) *The mode of onset*, very gradual, with headache, stupor, etc.
- (b) *Eye-signs*, squint, in this case convergent, usually divergent. Slight and varying, but for a time distinct enough, inequality of pupil.
- (c) *Spasm of neck muscles* and opisthotonus with pain on moving head; persistent and severe for weeks.
- (d) *Kernig's sign*, marked response on slight stretching of sciatic nerve.
- (e) *The cry*, a characteristic hydrocephalic night-cry, apart from the usual crying of a sick child.
- (f) *The vomiting* occurring during onset and not very persistent.
- (g) *The clinical course*, gradual and extreme emaciation, equal almost to that occurring in marasmic infants.

The temperature, very varying. For some weeks during the middle period of the illness so low that he had to be kept warm by hot water bags, etc., in the bed, and resembled in some respects a hibernating animal.

(h) *The respiration*, slow and irregular, especially at early middle period.

(i) *Paresis*, marked muscular insufficiency, especially in limbs, with inequality of distribution.

(j) *Irritative* symptoms, scarcely to be noted at all ; very little, if any, twitching or continuous movement of arm or leg, as so often seen ; but on two occasions the facial muscles of one side were found contracted and twitching as if general convulsions were impending.

Points in favour of a diagnosis of tubercular as against simple meningitis are :

1. Suspected lesion in base of left lung and absence of otitis or other suppurative focus.

2. Gradual onset.

3. Slow development of symptoms and course of disease. Simple meningitis usually begins in healthy child so suddenly as to simulate pneumonia or other acute disease.

4. Absence of marked reaction and constitutional disturbance ; temperature and pulse at first not far from normal.

5. Squint and other cranial-nerve symptoms not early developed, as usually is the case in simple meningitis ; no general hyperæsthesia, so often seen in early stages of non-tubercular meningitis.

6. Great preponderance of tubercular over non-tubercular cases in sporadic meningitis, at least three to one.

Other theories such as cervical caries, cerebral abscess, tumor, meningeal hemorrhage from blow, etc., do not seem to me to be arguable.

TREATMENT.

May 14. Purgative.

May 15. Ice bag ordered to head ; worm at nape of neck for weeks.

Two doses of ammon. brom. gr. xij four hours apart.

R	Potass. iodid.	gr. $\frac{5}{8}$.
	Ammon. bromid.	gr iv.
	Tr. gelsem.	℥ iij.
	Elix. lactopept.	ʒss.
	Aq. cassiæ ad.	ʒj.

S. ʒj every 4 hours.

Purgatives as required.

May 26. Morphine $\frac{1}{30}$ hypodermically.

May 28. Morphine $\frac{1}{30}$ hypodermically.

June 26. Phenacetin gr. ss every 4 hours if temperature up.

July 9. Tr. gelsem. discontinued ; mixture continued otherwise as before.

Sept. 11. Ferrol ʒj t. i.d. p.c.

Sept. 13. Former mixture discontinued.

R	Potass. iodid.	ʒj.
	Elix. lactopept.	ʒiij.
	Ag. Cassiæ ad.	ʒiu.

S. ʒj every 4 hours.

Hæmaboloids ordered about July 10th.

A CASE OF ASTHMA ASSOCIATED WITH PROLAPSE OF THE LIVER.*

By H. B. ANDERSON, M.D., C.M., M.R.C.S., L.R.C.P.

Professor of Pathology, Trinity Medical College; Physician to St. Michael's Hospital and to the Outdoor Department, Hospital for Sick Children, &c.

The etiological relationship which various sources of reflex irritation bear to attacks of spasmodic asthma, makes the report of the following case of interest, particularly as the determining factor in this instance is certainly an unusual one.

T.R., aged 25 years. Family history good; no record of asthma or other nervous affection. Patient was always rather delicate. In the summer of 1890, while working on his father's farm, keeping bachelor's hall at the time, he became very thin, was troubled with "catarrh" in the throat and nose and noticed a tendency to wheezing at times. For a year the wheezing disappeared. In the fall of 1891 the catarrh became worse and he had fits of coughing usually worse towards morning. In January 1892, he suffered from an attack of pneumonia and pleurisy on the right side. The amount of pleuritic effusion at this time could not be ascertained. Following this attack, Dr. D. J. Gibb Wishart treated him for the nasal trouble, removing several polypi. The catarrh was improved but the cough continued and he now began to suffer from asthmatic attacks at intervals of about three months, though he suffered from more or less wheeziness all the time. About Christmas, 1893, the patient suffered from a second attack of pleurisy on the right side, which confined him to the house for a month. The asthmatic trouble not improving, he was examined by a doctor the following May, who told him his liver was enlarged. Under medical advice, he went to the Northwest Territory in June, 1894, but gained no relief. Towards the fall, the attacks became more frequent and severe. He now began to suffer from indigestion, which was always worse before and during an attack, though it continued more or less all the time. The bowels were irregular and mucus appeared in the stools. A physician who examined him at this time told him his liver was displaced downwards. Under treatment for indigestion the asthma improved, and for a year he was pretty well; then he had another attack of right-sided pleurisy lasting about a month. He returned to his home in Toronto in January, 1896, and soon after the asthmatic attacks recurred. At this time he first came under my care. The asthmatic attacks were always preceded and accompanied by severe indigestion. On examination I found the liver displaced downwards, its lower margin as low as the umbilicus, with corresponding absence of liver dulness in the usual area over the ribs. The patient was put in bed and kept at rest, the diet carefully regulated and

* Presented before the Toronto Clinical Society.

the indigestion treated. An attempt to replace the liver by mechanical pressure failed, but after the asthmatic attack subsided, the organ returned to its proper position of itself, the patient experiencing a distinct sense of relief. After this the asthma was better, the attacks were much less severe and for long periods—5 months at one time—he was quite free. The liver remained in place until July, 1900, when it again became prolapsed. The patient immediately began to suffer from wheeziness. He sought relief by going to Muskoka but he only became worse. He wanted to sit all the time as he experienced a feeling of pressure or fulness, and at times pain, which was aggravated by standing. On eating he had a peculiar feeling as if the food did not enter the stomach. He suffered from bloating after meals, the tongue was thickly coated with a white fur, breath offensive; no vomiting; bowels fairly regular. He returned to Toronto August 1st, not any better, and I was called to see him. The liver formed a prominence on the right side easily noted on inspection. It was hard, tense, and smooth and the lower edge could readily be palpated as low as the umbilicus. Percussion revealed a corresponding area of dulness, the upper edge being just above the free margin of the ribs. There was a distinct depression of the lower true ribs on the right side in the lateral region of the chest. The patient was put to bed, the foot of which was raised, saline purgatives were administered; diet was carefully regulated and an attempt was made to return the liver by putting the patient in a favorable posture and applying pressure, but owing to the tension from enlargement and the retraction of the ribs, this was impossible. An anti-spasmodic mixture was ordered.

In a short time the liver became softer to palpation, the sensation of fulness and discomfort became less, digestion improved, the dyspnoea was relieved and altogether the patient became much more comfortable. The liver now began to return to its proper position, the upper margin being found higher on percussion and the lower margin could be palpated about half way between the umbilicus and the free margin of the ribs.

About a fortnight ago the patient had a recurrence of the asthma with descent of the liver: at the same time he suffered from an attack of diarrhoea. The condition again improved by rest, etc., as before. The right kidney is palpable, the lungs show some evidences of emphysema. Physical examination of the other organs discovers nothing abnormal. Urine is normal.

The exact relationship between the various conditions noted, is not easily traced. The attacks of right sided pneumonia and pleurisy from which the patient suffered may have helped to produce the hepatic prolapse, though it is impossible to prove that they did. Certain it is that the first real attack of asthma followed the pneumonia. That the hepatic prolapse aggravated, if it did not actually occasion the asthmatic attacks, there can be no doubt. The patient noted this fact himself and so long as the liver remains in place he is comfortable. Moreover the asthmatic attacks are always improved by treatment directed towards the replacement of the organ. Whether the prolapse acts directly as a cause, or indirectly by producing the gastric disturbances noted before the attacks, it is impossible to say. Probably the reflex disturbance produced in each of these ways would play a part.

At present an attempt is being made to support the organ by a bandage. If this is not successful operative measures may be resorted to.

The case presents the following points of special interest:—

1. The occurrence of hepatic prolapse is in itself not very frequent. Graham collected only 70 cases reported during the last 30 years.

2. The condition occurs far most frequently in women who have borne several children and have loose abdominal walls, very rare in men.

3. The etiological association of hepatic prolapse with asthma has not previously been noted so far as I am aware.

SELECTED ARTICLES.

DIET IN TYPHOID FEVER.

By DR JAMES TYSON.

Professor of Medicine, University of Pennsylvania.

In the majority of cases of typhoid fever milk is the safest and most satisfactory diet. My belief thus stated is founded on experience sustained by what we know of the physiology of digestion and nutrition. As to experience I shall say nothing more, since the weight allowed it must rest solely upon whatever confidence is placed in my ability to deduce conclusions from an experience extending over more than thirty years of active hospital and private practice.

A word, however, as to the support such belief receives from other sources. First is the fact that milk furnishes in an easily assimilable form the food constituents which observation and experiment have shown to be essential to a properly constituted diet, viz., proteids, fats, sugars, minerals and water. These may require modification as to proportion by reason of age, occupation and climate, but these elements in some proportion go to make up every dietary the world over. It is to be remembered that starch is practically sugar. They constitute the food of the young of all mammals, furnished by nature through the mothers, at an age when artificial foods are regarded as unnatural, and used only when accident interferes with the natural source. As to quantity required in typhoid fever it may be put down for an adult at from four ounces as a minimum to eight ounces as a maximum every two hours. More definite amounts must be determined by watching the events of digestion, especially the state of the stools. If there is diarrhea the milk should be boiled or peptonized. If the stools contain fragments of undigested casein the quantity is too large and must be reduced. Should the use of the smaller amounts be followed by similar evidence of indigestion dilution with water or carbonated water should be practised or peptonizing again employed. Rich milk should always be avoided.

In declaring that milk is the most suitable food for the majority of cases of typhoid fever, I do not wish to be understood as holding that there are no conditions demanding modifications of the initial statement.

These conditions, I may add, however, do not very often present themselves. The first which may demand a deviation from the rule is an inability to take milk, either because of its evidently disagreeing or because of some insuperable prejudice against it. I believe the experience of all practising physicians agrees with my own, that this is a condition far more seldom met than some suppose. In other words, there are many persons who think they cannot take milk, who, when actually sick, find no difficulty whatever in doing so.

A second effect of a milk diet which sometimes demands deviation from it is an increase in the tendency to constipation which sometimes occurs in typhoid fever and which undoubtedly milk favors. In such cases milk should not be boiled. This tendency may be further counteracted by the addition of buttermilk, of animal broths, and particularly of chicken broth, of beef juice and of the various forms of peptonized foods, either liquid or reduced to the liquid form by the addition of hot water. An objection to animal broths made by those who are anxious to depart still farther from the milk diet is that they are typical culture media, and as such illy adapted as nutrients, since they favor the multiplication of bacteria in the intestines. This sounds well, but I believe apprehended danger from this source has little practical foundation. Certainly when made by the aid of heat, as they should be, they are sterile at the outset, and it is doubtful whether there is any food which may not become more or less a culture medium when introduced into the bowel. It is to be remembered, too, that antiseptic qualities are possessed by certain digestive fluids, notably the gastric juice and the bile. Such antiseptic effect may be increased by the administration of hydrochloric acid or other antiseptic.

Should evidences of inability to assimilate milk continue to present themselves after reducing the quantity of milk to reasonable limits, there is no more satisfactory nourishment than albumen water, which consists of the white of eggs mixed with water in varying proportions. The whites of two eggs to a pint of cold water may be considered an average proportion, but the mixture or solution may be made weaker than this, or even stronger. A little lemon juice, a fluidram or more, may be added to the pint as a flavor, or the same quantity of brandy or whisky. In extreme cases of delicate stomach, albumen water may be used alone for a time or in conjunction with milk or beef juice.

Modifications in diet demanded by symptoms or complications arising in the course of the disease, as well as by convalescence and recovery, should form a part of remarks on diet in typhoid fever. The complications of hemorrhage and peritonitis are the most important. The occurrence of hemorrhage calls for an immediate reduction in the amount of food. The reduction should be positive, and it may be that for a number of hours it is better to give no food at all. The indication for an arrest of peristalsis far exceeds all others, and in no way is this so well secured as by the total omission of food. Where total cessation of feeding is not deemed necessary, the quantity of milk may be reduced to half an ounce or an ounce every two hours until the danger of hemorrhage has passed away. The same remarks apply when there is perforation of the bowel.

Most important are correct notions as to the transition from the diet of one actually ill from typhoid fever to that suitable to convalescence. With a view to simplicity in instruction to nurses and young physicians, I lay down quite an arbitrary rule, of which it may be said that if it errs, it errs on the safe side. This rule is to adhere to liquid food in the shape of milk or broths, beef juice or albumen water, until the temperature has been normal one week. Then I allow a single soft boiled egg. If nothing happens in twenty-four hours after this, I allow an egg daily. If after two or three days everything goes well, I permit a small dish of very soft milk toast, tentatively at first, as with egg. If all continues well, a small quantity of well-boiled rice or of strained, well-cooked oatmeal, is added. Next a small piece of steak may be chewed, or, if in season, two or three small raw oysters. Thus each article of food is added, one after another, until a reasonable mixed diet is taken. Chicken is one of the last foods allowed. Even earlier than at the end of a week of normal temperature a raw egg may be given, mixed with milk and perhaps a little sherry or whisky to flavor it, if the patient complains of being hungry, or it is thought he is not being sufficiently nourished.

I do not deny that there are articles of food which may be given with safety, but there are very few of these not already mentioned which I feel quite comfortable to use, and as I believe that they are not necessary and the patient can get along very well without them, I do not think it right to take the risk, except for some extraordinary reasons. Under such circumstances I reserve the right to make such changes as common sense dictates. I am sure I have seen fever arise after the allowing of soft boiled eggs, for example, at a date earlier than that named.

I have said nothing in the foregoing as to the convenience of the milk diet. Convenience should certainly be made secondary to efficiency, and no sacrifice of the latter to the former is justified. Yet no one can question the great help afforded in most cases by having at hand a food ready prepared such as milk, while there are circumstances in which the preparation of other foods become an impossibility. When this is the case it is a great satisfaction to know that the food which requires no preparation, or, at most, heating or dilluting, is the best for our patient.—*Univ. Med. Mag.*

TREATMENT OF DYSPEPSIA.

The *Medical Review*, London, July, 1900, quotes T. Lauder Brunton (*Clinical Journal*, April 25th, 1900), as stating that the first rule for the patient who suffers from indigestion is, eat slowly, masticate thoroughly, insalivate completely. Many patients will say that they eat slowly, yet they do not masticate thoroughly. If the patient will not, of his own accord, follow the rule, he must, if necessary, follow Sir Andrew Clark's rule—count the bites. For every mouthful of meat he must allow 32 bites, or one bite to every tooth, if the meat is tough he must allow 64 bites, and if very tough, 96 bites.

The next rule is, let the patient take his solids and liquids separately. The reason for this is that if a patient with a weak digestion swallows much liquid—whether it be soup, plain water, mineral water, whisky and water, or beer—he dilutes his gastric juice, and thus lessens its digestive power. So it is better for a patient, who has weak digestion, to take his food without liquid. One meal, however, may be made an exception, and that is breakfast, because the food is generally of a soft and chiefly farinaceous character, and therefore a little more latitude may be allowed. But there is another reason for making the patient take food and liquid separately, and that is that unmasticated food cannot be swallowed without liquid. So that, even at breakfast, tell the patient that he can, if he likes, take a breakfast cupful of tea, not strong, but towards the end of the meal. Of course the gastric juice is diluted by the tea, but this does not matter so much in the case of farinaceous food as in the case of luncheon and dinner, into which proteids enter largely.

In many cases those rules are sufficient to remove dyspepsia. But in cases where they are insufficient, the third one comes into play: Let the patient take his farinaceous foods at different meals. That is to say, he may take bread and butter for breakfast, but he must take neither fish, eggs, nor meat. In the middle of the day he must take fish, eggs, or meat, but no farinaceous food whatever. At about five o'clock he should again have a farinaceous meal, such as he had at luncheon. Only food of the same kind is put into the stomach at each meal, and so there is no delay from the different digestibility of the different kinds of food, the whole contents of the stomach become comminuted and digested and passed on into the intestine about the same time. Under these three rules a great number of dyspeptic patients can be cured.

But patients must have some fluid. The best liquid they can drink is hot water, and the best times to drink it are on rising in the morning, again between 11 and 12 in the forenoon, again about 4 or 5 in the afternoon, and, lastly, at night before going to bed. Thus the patient is given all the fluid he requires, not when it will dilute the gastric juice, but when it will assist in washing out of the stomach the remnants of the previous meal. Given at 12 o'clock, it tends to wash the breakfast out of the stomach, at 4 it washes out the remains of the luncheon, and so on.

In cases where the stomach is weak it may be an advantage to supplement the normal gastric juice by giving some acid and pepsin; and,

apparently, there is sometimes an advantage in giving mixed enzymes—not pepsin alone, but pepsin containing rennin. Just before meals it is often advisable to give a little alkali, which tends to stimulate the secretion of gastric juice. The common way of giving this stimulant is with some bitter, containing no tannin, such as calumba; and this seems useful when the stomach is not irritable, and when there does not seem to be much catarrh. But if there is much catarrh in the stomach better results are often got from substances containing tannin, such as the infusion of gentian; and in patients with a flabby tongue perchlorid of iron combined with quassia is often useful. When the tongue is large, pale, and flabby, and marked by the teeth at the edges, better results are sometimes got from quassia and iron than from pepsin and other remedies.

In some cases, when the habit of taking large meals or drinking large quantities of water has led to dilation of the stomach, the plan of taking fluids and solids at separate times very often aids greatly in restoring the normal condition. But when it does not, then the use of a soft rubber tube to wash out the stomach either every morning on rising, or every night before going to bed, will often help very greatly. In cases of permanent dilation of the stomach due to pyloric contraction, the only remedy is gastroenterostomy.

EXPERIMENTAL STUDY OF OXALURIA, WITH SPECIAL REFERENCE TO ITS FERMENTATIVE ORIGIN.

From a series of experiments upon lower animals, and from a careful study of the subject, H. Baldwin (*Journal of Experimental Medicine*, October, 1900) has reached the following conclusions:

1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.
2. Unless the utmost care is exercised, the result obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Schultsen's methods, in which the calcium oxalate is precipitated in an alkaline solution.
3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.
4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine.
5. The normal daily excretion of the oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.
6. In health no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.
7. In certain clinical disturbances which in some cases were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

8. This formation in the organism is connected with fermentative activity in the alimentary canal.

(a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

(b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

(c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding with sugar.

(d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.—*Med. Age.*

CAUSES OF SUICIDE.

Dr. J. W. C. Cuddy, professor of medicine in the University School of Medicine, Baltimore, contributed to *The Baltimore American* an able article on the subject of suicide. He is of the opinion, which is probably shared by most scientific men, that no absolutely sane person takes his own life. In those cases in which an individual commits suicide there is undoubtedly an unhinging of the mental balance. This may be temporary, but nevertheless self-destruction must be attributed to an insane impulse. There are many, however, of course, who do not hold this view, but believe that suicide may be a deliberate sane act. Dr. Cuddy writes as follows on the matter: "There are very few direct causes of suicide, and these are the very ones which will most readily disarrange the harmonious workings of a healthy mind. The most frequent causes of self-destruction to which I allude can best be told by a quotation from one of my own lectures to the medical class during the last session. In that lecture I said: 'The main exciting causes of suicide are financial depression, religious mania, and unrequited love. The first mentioned are generally male adults, who, as a rule, complete their sad taking off by the help of the leaden ball or glistening steel; the unbalanced religionist generally seeks some secluded spot, where with hempen cord he chokes out the God-given life which should have been used for a better purpose; while it remains for lovesick maidens and half-crazed men to terminate their useless existence by the aid of some poisonous drug, nearly always the same, for the intelligence of such persons rarely leads them beyond the laudanum bottle of the household, in whose somnolent depths they seek their voluntary oblivion.' Now these three causes which cover the majority of cases of suicide are all producing agencies of deranged nerve action, and it is but natural to conclude that in these instances the brain cells are sufficiently disorganized to produce a condition whereby normal

or mental control is lost prior to the consummation of the suicidal act. The question might be asked, Why do not these operative causes act alike in all similar cases? All brains are not constituted nor developed alike. Some are able to resist the most distressing and depressing agents, just as some bodies will exist in a bacteria-laden atmosphere and escape unscathed, while others similarly placed will readily succumb, even to fatal results."

Dr. Cuddy also mentions heredity as perhaps a predisposing cause, but fails to draw attention to one of the most potent causes of suicide—alcoholism. There can be no doubt whatever that strong drink drives a vast number of human beings to death by their own hands. It would, of course, be extremely difficult, probably impossible, to tabulate definitely in their correct order the various causes of suicide. The majority of observers would haply declare both religion and the lack of religion to be responsible for more suicides than any other one cause, but few will deny that to excessive drinking is due directly and indirectly a holocaust of victims.—*N. Y. Med. Record*.

DELIRIUM TREMENS.

By CHARLES J. DOUGLAS, M.D., Boston,
Physician-in-charge of the Walter Baker Sanitarium.

At the last meeting of the American Medical Association a paper was read on the treatment of acute alcoholism by large doses of digitalis. The writer of the paper reports ten cases thus treated in Bellevue Hospital, and he concludes that the results, in properly selected cases, are "exceptionally favorable." Two of these patients died—a mortality of twenty per cent. The two cases in which he says this treatment showed its "most beneficial effects" are described in substance as follows: Both patients were robust young men suffering with delirium tremens. The first one came to Bellevue Hospital late in the afternoon, and did not sleep till nine o'clock the next morning, a period of about fifteen hours. During all this time he was delirious and was "restrained," probably in a strait-jacket or a cell. The second of the two patients whose treatment was considered particularly successful was delirious twenty-four hours, during which time "the ordinary treatment of narcotics was followed, with no effect." Digitalis was then prescribed with no better results than in the first case, many hours of delirium under restraint preceding sleep.

If such results in the treatment of delirium tremens are considered so exceptionally favorable as to warrant their report to the American Medical Association, it would be interesting to learn what results are deemed ordinary. If so excellent a hospital as Bellevue can do no better than this, what can be expected of hospitals that are less fortunately situated and less thoroughly equipped? To allow a delirium tremens patient to remain shackled in sleepless delirium from six p.m. to nine o'clock the next morning is inexcusable and cruel. Several mistakes, in

my opinion, were made in the treatment of these patients, mistakes which, perhaps, are made in many hospitals.

First, such patients should be put to sleep soon after their arrival, which can be done with apomorphine in a few minutes without danger and without emesis. The "stream of consciousness" can be shut off with valve-like precision by the use of this remedy, and sleep is the one specific for delirium tremens. My method of employing apomorphine for this purpose, I have fully described in articles published in various medical journals of this country and Europe. (See, especially, *New York Medical Journal*, October 28, 1899, and March 17, 1900; also *Lancet*, April 14, 1900, etc.) Secondly, patients should not be restrained by physical force. This not only adds to their suffering, but increases and prolongs the delirium. It is needless, ineffective and cruel. Thirdly, whiskey or alcohol in some other form should be prescribed, as sudden withdrawal aggravates the disease and frequently causes it. The records of death furnished by police stations where drunken men are suddenly deprived of liquor, supply abundant proof of the danger attending such a course. Fourthly, the patients should be nourished with milk, egg-nog, or some other liquid food. Delirium tremens seldom affects those who have not been deprived of proper nourishment for some time. Hence easily assimilable food is indicated. One case will sufficiently illustrate my methods:

M. A., after a spree, placed himself in the hands of an excellent Boston physician and a trained nurse. The physician at once prohibited the use of all forms of alcoholic liquor, and prescribed the ordinary narcotics hypodermically and by the stomach. This treatment continued one week, during which time he slept but little and suffered with hallucinations. During the last forty-eight hours of that period he had continuous delirium and did not sleep at all. His physician then sent him to our sanitarium. I at once prescribed whiskey and milk, and administered the apomorphine treatment. In fifteen minutes he voluntarily lay down and immediately went to sleep. He slept five hours, and when, at 6 p.m., I awoke him to give him nourishment, I found him greatly improved in every way, with but slight traces of hallucination. At 10 p.m., I again administered the same hypnotic treatment and he promptly went to sleep as before, sleeping all night. In the morning he was perfectly sane.

These methods are the result of my experience in the treatment of hundreds of alcoholics in all forms of the disease. In delirium tremens I never use forcible restraint, never suddenly withdraw alcohol, and have never had a death.—*N. Y. Med. Journal*.

INTERNAL ANTISEPSIS.*

By REYNOLD WEBB WILCOX, M.D., LL.D.,

Professor of Medicine and Therapeutics in the New York Post-Graduate Medical School and Physician to the Hospital; Physician to St. Mark's Hospital.

The author begins with the statement that it is in the field of the infectious diseases that internal antiseptics will of necessity have its most important application. It should be useful in septicæmia, and possibly in pyæmias in which the pus foci are not accessible to the surgeon. Not that the author rejects surgical methods; accessible foci of infection should receive that treatment. His plea is for a method of combating infection in cases where surgery fails.

Is internal antiseptics possible? If the symptoms indicative of septicæmic infection retrogress, if the chills, malaise, headache, remittent fever, restlessness, prostration, sweating, muttering delirium, red and glazed or leathery tongue, full, bounding and compressible pulse, enlargement of the spleen, and hypostatic congestion of the lungs gradually become less marked under the administration of a remedy, it may be suspected that the improvement is due to it. If this association of remedy and relief becomes fairly constant, and the failures explainable, the suspicion may become a well-established belief.

To be an efficient antiseptic, a remedy must reach the micro organisms anywhere in the entire area of distribution of the blood, and either completely destroy them or prevent their further growth. The symptoms due to bacterial activity, as well as the evidences of the presence of the micro-organisms in the excreta, must diminish and disappear.

The author then proceeds to instance some of the various methods by means of which the efficacy of internal antiseptics is demonstrated. Thus, as he proved in his Albany paper, of 1895, chlorin administered in typhoid fever cleans the tongue, improves the appetite and digestion, lessens the fever, deodorizes the stools, betters the general condition and the nervous system, and shortens the duration of the disease. In tuberculosis the administration of creosote, and more especially the carbonate of that drug in prolonged doses, is followed by a diminution of the number of bacilli in the expectoration, as has been demonstrated by Hölcher and others. In many disease conditions of the alimentary canal, Bouchard found that the number of pathogenic bacteria in the feces was markedly diminished by the administration of naphthol. Hueppe found that no cultures could be made from the intestinal contents of a patient who had died from an apoplexy appearing in the course of an attack of Asiatic cholera who had been treated with bismuth tribromo-phenolate (xeroform) exclusively. In other and exactly similar instances, when tannic acid injections had been used, cultures were made without difficulty.

*Abstracted from a paper read before the Medical Association of the Greater City of New York, and published in the *Medical News*, of October 6, 1900.

Finally, it has been known for some years, that most typhoid fever patients discharge large numbers of Eberth's bacilli in their urine. Quite recently, Richardson, Horton-Smith, Gwyn and Andrews have demonstrated that hexamethylen-tetramine or urotropin administered by the mouth causes them to disappear completely.

Urinary toxicity itself, as shown by its varying toxicity when injected experimentally, Wilcox does not believe an accurate method of determining the value of a certain plan of treatment. Whilst changes in the uro-toxic co-efficient may be assumed to indicate variations in the elimination of toxins by the kidneys, physical or chemical analysis is necessary to prevent misleading results.

To the question as to whether internal antiseptics may ever be harmful the author answers in the affirmative. Certain substances which are most trustworthy antiseptics in vitro are poisonous in the body. Instances of fatal poisoning by phenol, iodoform, corrosive sublimate, etc., have been too frequent to be ignored; and these and all substances which are local irritants or destroyers of blood corpuscles cannot be employed.

More especially as regards the employment of intestinal antiseptics it is often held that the bacteria are essential for digestion and assimilation and that their destruction is liable to interfere with the nutrition of the patient. The researches of Nencki, Nuttall, Thierfelder and other observers would show that bacteria are not necessary for these physiological processes, though certain loosely-combined compounds such as salol, bismuth salicylate, and others are broken up by them. This is confirmed by Levin's observations in the polar regions, where he found the intestinal contents of bears, seals, ducks, sharks, sea-urchins, crabs and other animals bacteria-free and sterile.

Dr. Wilcox then explains the conditions under which internal antiseptics should be employed. Surgical measures should be used when the infective foci are accessible. Infections resulting in septicaemias in which the toxins are most potent in causing danger, such as diphtheria, should be neutralized by antitoxins. Internal antiseptics are in place where the streptococcic infection is of most importance, and where a serum treatment is not thoroughly established. He warns his hearers that care must be taken in the administration of remedies like naphthalin or salicylic acid, which may act unfavorably upon the kidneys, or any of the phenols, which are cardiac depressants. Kind Providence is just as watchful over the pathogenic bacteria as over their unwilling host. On the other hand he deprecates the position of bacteriologists who deny the efficacy of small doses of intestinal disinfectants which do not kill the bacteria; forgetting that they may paralyze them and prevent the formation of toxins.

Among the general internal antiseptics the author considers chlorin, the salicylates, and quinin, and silver, recently suggested for that purpose. In 1890, Carey Lea first produced it in allotropic form, and seven years later, Credé first used the colloidal silver in medicine. It is almost entirely soluble in water and albuminous fluids, and it seems either to inhibit the action of staphylococci and streptococci, or destroy them altogether.

Colloidal silver is employed internally, dissolved in equal parts of albumin and glycerin, to prevent its conversion into a chloride in the stomach; in aqueous solution hypodermically, since it is non-irritating; as a 15 per cent. ointment, known as unguentum Credé, for inunction; and by rectal and intravenous injection. Schlossmann has shown that it is non-toxic and unirritating to mucous membranes and thus far no case of argyria has been reported.

Credé claimed that the colloidal silver has a very beneficial influence and often effects a rapid cure in recent and chronic sepsis and furunculosis, when secondary changes in the vital organs have not occurred. He and others have treated osteomyelitis, phlegmonous angina, furunculosis, erysipelas, so-called gonorrhœal and articular rheumatism, etc., by this method. Various reports, some very enthusiastic, have been presented; of puerperal fever (Peters, Jones, Voorhees), cerebrospinal meningitis (Schirmer), acute mastitis (Cumston), malignant scarlet fever (Credé), divers septic processes (Werler), furunculosis (Wolfram), and finally in purpura in the horse (Dieckerhoff). Wilcox's own experience in septic phlebitis, of which an unusually large percentage has occurred in his typhoid fever cases, has been most satisfactory. He employed it as inunctions of thirty minutes' duration. In one instance of septic phlebitis following amœbic dysentery the results were almost marvelous.

The author then considers intestinal antiseptics, of which there are many methods. Amongst the most useful remedies for this purpose are various insoluble substances, such as naphthalin, betanaphthol and various bismuth compounds. Naphthalin, however, sometimes produces vesical irritation and other untoward symptoms. Salol is effective in many cases, but its use presupposes sound kidneys, and if fever is present, or the contents of the duodenum are too acid, it is not decomposed into its constituents. Betanaphthol, though its antiseptic action was conclusively proven by Bouchard, is found too irritating to the stomach. The bismuth compounds are not irritant, and their use has been crowned with success.

The two compounds of bismuth that have been especially studied are the naphtholate (orphol) and the tribromo-phenolate (xeroform). With the former, Jasenski found that whilst the bismuth was almost completely excreted by the bowels, some of the naphthol was eliminated by the kidneys. It is certainly not poisonous in daily doses of seventy-five to one hundred and twenty grains for adults, and this quantity is quite sufficient to inhibit bacterial action. The literature has been extensive, and, in general, confirms Wilcox's personal observations.

In regard to the tribromo-phenolate, the observations of Fasano are quite conclusive. It rapidly diminishes the amount of indican in the urine and the putrefactive action in the intestines. After five days' use the feces of patients suffering from typhoid fever give no cultures of typhoid bacilli or the bacterium coli. Intestinal tuberculosis in some instances yields to emulsions administered either by the mouth or the rectum. The tribromo-phenol is apparently slowly liberated, so that no poisonous symptoms appear even from daily doses of over one hundred grains. Some of it, at least, passes out through the urine, for Reynders

has been able to detect tribromo-phenol, twenty-four hours after the absorption of the drug.

Internal remedies designed to act on the tubercle bacilli are too numerous to mention. Beechwood creosote, conceded to be useful in the treatment of pulmonary tuberculosis, has well-known disadvantages. The non-toxic and unirritating carbonate and perhaps other derivatives and guaiacol carbonate have thoroughly supplanted it. If it is not germicidal to the bacilli, it renders the soil unsuitable and hinders their development. Twenty to sixty drops of the creosotal thrice daily in port or sherry seems to be efficient. Thomson, Smith, Cassoute and Corgier testify to its value in pneumonia. Eschle has shown that guaiacol carbonate is certainly harmless. Four to seven grains four times a day is a sufficient dosage.

Urotropin (hexamethylen-tetramine), a condensation product of formaldehyde and ammonia, first made by von Butlerow, in 1860, is probably the best of the urinary antiseptics. It is used to sterilize the urine by destroying its micro-organisms, which it does effectually in pyelitis, pyelo-nephritis and cystitis. Nicolaier employs about eight grains thrice daily; but doses of even one hundred and fifty grains are well borne. Formaldehyde is liberated in the urine; and this, even in the smallest amounts, prevents the development of micro-organisms. Richardson found that its use by typhoid patients always freed the urine from the bacilli. Wilcox has made a personal observation in a case of tubercular cystitis, in which the bacilli diminished notably in the urine during its administration, but a continuance of the medication is necessary.

Thirty years ago, the author concludes, the foundations of surgical antiseptics were laid, and the ideal result has now been nearly attained. Internal antiseptics to-day rests upon quite as secure a basis as did the surgical at the beginning, and the ensuing three decades will doubtless see the fruition of our most daring hopes. As the surgeon gives credit to Lister, so must we acknowledge our indebtedness to Bouchard. We can now safely say that internal antiseptics is more than the dream of the theorist.—*New England Medical Monthly.*

TREATMENT OF TAPEWORM.

Little has been added of late years to our knowledge of the treatment of this somewhat common affection. Any one referring to a work upon materia medica or practice will be surprised at the number of remedies which are recommended for the removal of tapeworm. In actual practice it is found that with all remedies there are a considerable number of failures. For certainty of results the ethereal extract of malefern, easily leads the list.

If the entire worm is not removed it will grow again, so that it is quite important to find and identify the head, that the patient may be assured of a cure. Theoretically the head is supposed in some cases to be attached in the folds of the intestine in such a way that the valvule conniventes protect the head from the poisonous action of the anthel-

mintic. The late Professor Agassiz suffered from a tapeworm for many years, which resisted all efforts at removal. He was accustomed to use his personal worm in the class-room demonstrations. It is not known that his general health suffered from the parasite.

It is commonly believed that the *Tenia solium*, or pork tapeworm, is a common parasite in this country, but such is not the case; it is by far the most frequent parasite in Europe. In this country the beef tapeworm, or the *Tenia saginata*, is by far the most frequent. In not more than one case in twenty in this country is the variety of worm the *Tenia solium*. There are a number of varieties of tapeworm, but they are rare in man, and some which occur in the human have never been found in this country. The treatment of the beef and pork tapeworms is identical.

The remedy most frequently employed is the extract of male-fern. Pumpkin seeds are effectual sometimes, but the dose is very large; it is sometimes difficult to keep it on the stomach, and it is not always easy to procure the pumpkin seeds in a comparatively fresh condition. The more recently they have been gathered and the care with which they have been kept determine to a large degree their efficiency. At least four ounces of the seed should be employed, the cortex removed, and the kernel bruised in a mortar with sufficient fluid to admit of the mixture being drunk. The distinct advantage of the pumpkin seed treatment is its freedom from poisonous properties, but it is somewhat less efficient than the male-fern and more difficult of application.

In using male-fern, poisonous results, and in rare cases, death, have been noted. These cases were attended with nausea, vertigo, syncope, convulsions and unconsciousness. Delirium may be present, and in fatal cases this passes into coma and death. Occasionally there is contraction of the retinal arteries with temporary amblyopia and amaurosis, which sometimes is followed by optic atrophy. The anthelmintic as well as the toxic properties of male-fern are to be found in the filicic acid. This is said to be freely soluble in oils; hence, theoretically it is supposed that the poisonous properties are increased by the coincident administration with castor oil. Of the truth of this statement we are not sure. One thing is certain, that experimentally it has been shown that the toxic action of male-fern is much less upon the worm in the presence of oil. One German observer found that in an ethereal extract of male-fern a worm would live but one hour, while another worm retained its vitality six hours in the same strength of solution, provided castor oil were added to it. The theory of this observer was that the oil protected the worm. It is difficult to see how the claim of Grawitz can be maintained, that the male-fern is more toxic if followed by oils. Be this as it may, it is certain that castor oil should not be given as an accompanying cathartic with male-fern. Another common practice is to starve the patient for a day or two, or at least withhold all food for twenty-four hours preceding the administration of the fern. Such practice is of doubtful propriety, as the stomach is rendered somewhat irritable, and the susceptibility of the patient to the toxic action of the drug is markedly increased by the fasting. There is no good evidence to the effect that

this fasting has very much effect upon the worm. On the day that the dose is administered it is perhaps well that the patient should take no breakfast, and a saline cathartic might be administered the preceding night without objection.

The male-fern is preferably administered in combination; the best adjuvant is kamala. This substance is certainly a valuable and much neglected tænicide, and at the same time it is a brisk cathartic. One drachm of the normal liquid of tincture of kamala, combined with one drachm of the ethereal extract of male-fern, the whole made into an emulsion of about two ounces, forms a most efficient combination and one that is quite free from toxic properties in the absence of special idiosyncrasy. Such a dose administered upon an empty stomach in the morning is almost invariably followed by the expulsion of the entire worm early in the afternoon.

It is difficult to find and identify the head of the worm. This is due to the fact that it is easily broken, and if the passages take place into an open vessel the neck of the worm is easily broken. This may avour re-attachment of a loosened worm further down in the intestine, and it is avoided by having the contents of the bowel discharged into warm water. This prevents contraction of the worm with a subsequent breaking, and enables us to readily find and identify the head in case it is passed.

A method which has been referred to in MEDICINE is that of J. W. Kime, of Iowa, who has devised a means of directly poisoning the worm. After a portion of the worm has passed, and while it is still attached, a string is tied around the broken portion and a half-grain of morphine is injected into its body. The tapeworm is said to have circulating tubes between each of the segments, and this injection is said to effectually poison the worm so that the head comes away entire. This ingenious method of getting rid of tapeworm is worthy of further trial. Since the original publication over a year ago, we have seen no reference to it in the literature.—*Medicine*.

THE SIGNIFICANCE AND TREATMENT OF OXALURIA.

For many years physicians were wont to believe that considerable quantities of the oxalates in the urine indicated certain pathological conditions and enabled us to institute therapeutic measures for their relief. Even such accurate students of clinical medicine and of the conditions of the urine as Golding, Bird, Begbie, and Prout, thought the so-called oxalic acid diathesis of very considerable importance, and it was not until the investigations of Smoler, Bacon, and others, that it was proved that most of the oxalic acid excreted in the urine had been ingested with the food. These remarks have been induced by an interesting article just published in the *Journal of Experimental Medicine* for October, 1900, by Dr. Helen Baldwin, who has been working in the laboratory of Dr. C. A. Herter, of New York. Dr. Herter's investigations into the subject of changes and conditions in the organs of secretion and excretion are, many of them, well known to our readers, and we are therefore much

interested in any contribution coming from his laboratory aside from the intrinsic merits of the present paper. The points which Dr. Baldwin undertook to solve in her research were as follows:

First, to discover whether oxalic acid is ever formed in the animal economy; then to estimate the influence of the ingestion of oxalic acid in foods upon the amount excreted in the urine; and finally, to study the physiological action of soluble oxalates with a view to deciding in what measure the presence of oxalic acid in the system is responsible for the symptoms attributed to the oxalic acid diathesis.

Among the foods which are known to contain considerable quantities of oxalic acid or oxalates may be mentioned spinach, rhubarb, dried figs, cocoa, tea, coffee, green beans, plums, tomatoes and strawberries. On the other hand, those foods which contain practically no oxalates are the various proteids, such as milk, meat and eggs, sugar, butter, corn-meal, and rice.

The conclusions arrived at by Dr. Baldwin seem to us of considerable importance, and are as follows:

1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Shultzen's methods, in which the calcium oxalate is precipitated in an alkaline solution.

3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.

4. A portion of the oxalic acid ingested with the food may be absorbed and reappear in the urine.

5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.

6. In health, no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.

7. In certain clinical disturbances which were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

- 8: This formation in the organism is connected with fermentative activity in the alimentary canal.

- (a) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

- (b) This experimental oxaluria is associated with a mucous gastritis, and with absence of free hydrochloric acid in the gastric contents.

- (c) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding of sugar.

- (d) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

These conclusions are of considerable interest because they throw some light upon the method of treatment which has long been known to medical clinicians, and because there has been, so far as we are aware, no adequate explanation, namely, the fact that in certain cases of melancholia associated with oxaluria, the administration of full doses of freshly prepared nitrohydrochloric acid will often do great good. It has been thought by some that this acid, under certain circumstances, influenced the action of the liver; and this may be true. But it would seem more probable from Dr. Baldwin's researches that the acid acts by preventing fermentation in the alimentary canal and that it also aids the gastric juice in properly dealing with food, since, as she points out in the conclusions already quoted, there is often an absence of free hydrochloric acid from the gastric juice when oxalic acid is formed in the organism; and further than this, that it is possible to produce an absence of free hydrochloric acid in the gastric contents by the artificial induction of oxaluria. Finally, it is also possible that the antiseptic influence of this acid in the stomach, by preventing fermentation, prevents the formation of oxalic acid in the gastric contents.—*The Therapeutic Gazette*.

THE ELECTROSTATIC TREATMENT OF NEURASTHENIA.*

BY WILLIAM BENHAM SNOW, M.D.

Neurasthenia, also known as the American disease, from the fact that it is so much more common with us than among the slow, easy-going nations of the old world, is a functional disorder caused by errors of life and habit.

The indulgence in luxuries by those who as a matter of fact take but little exercise, with excesses, both of eating and drinking, sexual excess, self abuse, and erotic states induced by undue excitement of passion, long engagements, tight lacing, social engagements, late hours, together with the hustle and bustle of modern competition in business are causes creating a variety of derangements finally ending in nervous exhaustion with all degrees of hyperesthesia, anesthesia, insomnia, and perversions innumerable. Various as are the causes and conditions arising from unnatural habits of life, one word is coined to include them all, *Neurasthenia*, and one rule—a return to a natural life—is the requisite if health is to be restored.

Many sufferers from this condition in this generation have received it, or a strong predisposition, as a heritage. Such furnish the most stubborn and intractable cases, and may never be cured, but may or may not gradually lapse into grave nervous conditions. While the aggregate of this class is large, they make up but a small percentage of the neurasthenics.

*Read before the American Electro-Therapeutic Association, Sept. 25, 1900.

thenics we meet. The prognosis is hopeful if some organic disease has not already attacked the patient. If only functional derangements are to be combatted the chances of recovery are good.

As varied as are the causes, so are the symptoms of neurasthenia. Anemia, insomnia, constipation, indigestion, sluggish conditions of the organs of secretion and excretion, irregular pains—especially in the back, neck, and head, are symptoms all present in a large percentage of the cases. Hysteria is present in very many and must be mastered early. Areas of anesthesia or hyperesthesia, and irregular neuralgic pains are frequent symptoms. Some lapse into melancholia. There may be grave apprehension of impending death from suspected disease of the heart, or other imagined disorder. Temporary impotence, suspension of menses, and disorders of the pelvic organs may play a large part in the causation, or obstacle to the prompt recovery of the patient. A most complete and careful analysis of every case is imperative before any treatment is instituted, then start right. Find the cause or causes and remove them. Place the patient under favorable surroundings, and do not prescribe rest, but healthful and well regulated out-of-door exercise and diversion in most every case. To this add careful judicious feeding and insure one daily evacuation commensurate to food ingested and encourage drinking of pure water. Discourage use of stimulants and excitement or recreation that will cause fatigue. Very cautiously prescribe hypnotics and nerve sedatives, but allow iron or strychnin if indicated. Such a resume would cure many cases in a season, but in others the sway of the pendulum has become so slow, and nervous and physical resources have been reduced to such a low ebb that some active energizing force is necessary to gently but firmly turn back the tide. Will rest and massage best serve the purpose? No, both are passive; they lack initiative. Impulse must be started from centers even though first aroused from the periphery. The normal relation of nerve and muscle is one designed for concerted action, and they always rise and fall together. Passive motion or rest neither afford an incentive to restoration nor do they induce nutrition. On the other hand an agency under control, gently and judiciously administered, which promotes the functional activity, not of one muscle but of all muscles, not of one nerve but of all nerves, not of one organ but of all, requires in addition only nutritive pabulum to promote restoration. The first law of life and health is exercise, not passive but active.

The body recuperates during rest—most vigorously when rest follows exercise. The muscle that develops most is the one that has the most judicious exercise. Under forced rest a muscle atrophies. Nature then demands properly regulated exercise, not rest, for recuperation and development. The means required to facilitate nature's efforts to restore the neurasthenic are; first correction of habit; second, congenial surroundings; third, judicious, well-regulated exercise; and, fourth, an agency, which by unlocking secretions, quieting nervous irritability, and overcoming local disturbances, will best assist the normal resumption of every bodily function.

The varied applications of static electricity satisfactorily meet these requirements. For the general tonic effects indicated in every case of neurasthenia, the wave current should be administered by placing the long spinal electrode (one inch in width and 18 to 22 inches in length, over the vertebral column from the cervical to the lumbar region for from at least 15 to 20 minutes, and employing as long a spark-gap as may be used without causing uncomfortable muscular contractions.

Patients will usually take a treatment with four inch spark discharging. Though persons with small muscles and with but little fat may not bear a two-inch spark-gap current, large or fat persons will bear and require one measured by a five or six inch spark discharge. After the first few applications, the patient perspires gently with each such treatment. Not only does the activity of sweat glands resume, but there is a gradually increasing resumption of other functions. There is marked increase in the daily excretion of solids in the urine, digestion improves, appetite returns, the bowels become more regular. In short there is a general improvement of every metabolic function.

While many cases have been cured by no other agency than the wave current, we believe that the active peripheral stimulation and massage afforded by the long and friction sparks hasten the recovery of every case, the time factor of which will depend on the duration of the affection, the adherence to regimen, the extent of functional derangement, the recuperative powers of the patient, the regularity with which the treatments are administered, and the technique employed. Treatment should be given daily for at least two weeks, when every second day may suffice.

Special symptoms will require special attention, as follows:

A dilated or atonic condition of the stomach will require sparks applied directly over the organ. And the same treatment will awaken the activity of a torpid liver and assist in overcoming the constipation usually present.

All sensory disturbances may be relieved by long or short sparks, friction sparks, or local application of the wave current. Headaches will be relieved by placing the stand electrode with point over head if patient is anemic, or at the level of the knees if asthenic during the administration of static wave current.

Palpitation of the heart and conditions of general malnutrition will usually call for no additional treatment.

In all cases, especially those of long standing, insomnia is often a most stubborn symptom, but uniformly yields where no brain lesion is present. A treatment administered just before retiring is most apt to induce refreshing sleep.

The wave current applied directly over the eyes or temple will relieve disagreeable eye symptoms, and over the larynx an aphonia of nervous origin.

The sexual functions require no special treatment, but restored confidence, and the general treatment.

Ovarian, uterine, or the pelvic congestions should receive proper local treatment with the wave current. Hysteria and other symptoms of neurasthenia may be promptly cured by the general and local treatment, as indicated.

The occupation neuroses occur as a rule in neurasthenics and must have the general as well as the local treatment. When treated early, these cases uniformly yield to the proper technique.

There is no nervous disorder more common to-day and no curable affection which has so often taxed professional skill, as neurasthenia; and we are sure that there is no known therapeutic means which so well meets the demands as static electricity. The results of administration are charming to those who have followed other plans of treatment. The improvement is marked after the first few treatments, and the result generally satisfactory.—*The Post Graduate*.

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

Stated meeting, January 2nd, 1901. The president, Dr. W. H. B. Aikins, occupied the chair.

AMPUTATION AT SHOULDER JOINT.

Dr. A. Primrose presented this patient and recited the history of the case. A man of thirty-five years last fall while crossing Queen St. was run down by street car, but the motorman did not notice that there was some object under the car until he noticed that something obstructed the wheels. While searching for the obstruction, an arm was brought from the curb, and then the man was found between the front wheels. The arm had been taken off above the insertion of the deltoid and the tissues were completely cut through. The wheel of the motor had served as an excellent angiotribe, because he had not lost a teaspoonful of blood. When seen by Dr. Primrose at the Emergency Hospital, the arm or rather stump was a mass of pulpified tissue, the humerus being broken into three pieces. The upper fragment was fractured into the shoulder joint. The condition of the skin was interesting. There had evidently been an evulsive force, a tubular portion of skin being found in the arm completely separated from the soft tissues. The axillary artery was tied high up, and having done that, cut the nerves as high as possible, and then dissected out the upper fragment of the humerus from the shoulder joint. The patient made a good recovery. There was a small drainage tube in for a few days.

EX-OPHTHALMIC GOITRE, WITH REPORT OF TWO CASES.

Dr. W. B. Thistle reviewed the causes of this disease, and then reported two cases. The first occurred in a man aged 24 years and the second in a woman aged 34 years. The woman consulted him for weakness and nervousness; had for some time slight enlargement of the neck, which had recently increased. She was a tall thin woman, married, having two children. Temperature was slightly elevated; pulse in the neighborhood of 120; prominent eye-balls. For some time had noticed palpitation, and had experienced fear and a sense of nervousness. The gland was punctured and a dark brown fluid drawn off. A solution of perchloride of iron was injected. Recovery was complete in this case. The second case gave a history of having had Grave's disease some six years ago. Recovery was complete at that time. When admitted to the hospital this time the patient showed every symptom of the disease. He had lost forty pounds. Temperature elevated slightly. Pulse varied from 130 to 160; no murmurs. Had several attacks of syncope; also troubled with attacks of diarrhoea. The treatment was rest in bed with iodide of potash and belladonna. There was very little general improve-

ment. The tumor which was present in this case was operated on by Dr. Peters, who removed it as well as a portion of the gland. The patient is now quite well.

FOREIGN BODY IN THE EYE WITH SKIAGRAPH.

Dr. G. Stirling Ryerson reported this case and exhibited the skiagraph. It is very seldom that we have a foreign body in the eye that it is necessary to take a skiagraph of. This was the case of a man doing work and it was supposed that a portion of the chisel broke off and struck the eye . . . It was not certain that the portion of steel was in the eye or not; and it was a very important question to decide whether the eye should be removed or not. The injury of the eye was not visible through the ophthalmoscope. The skiagraph was entirely successful, and showed where the body was, and also showed its comparative size and shape to some degree. Immediately after the skiagraph was taken the eye was removed; and it was found that a large portion of steel was firmly embedded in the eye and lying somewhat to the inner side of the optic nerve.

MISCELLANEOUS.

DON'TS IN CONNECTION WITH HEART DISEASE.—Don't feel called upon to give digitalis as soon as you hear a murmur over the heart. Study and treat the patient, not the murmur.

Don't conclude that every murmur means disease of the heart.

Don't forget that the pulse and general appearance of the patient often tell more than auscultation.

Don't neglect to note the character of the pulse when you feel it. Possibly you may look at the tongue to satisfy the patient; feel the pulse to instruct yourself.

Don't think that every systolic murmur at the apex indicates mitral regurgitation; every systolic murmur at the aortic interspace, aortic stenosis. The former may be trivial; the latter may be due to atheroma of the arch of the aorta.

Don't say that every sudden death is due to heart disease.

Don't forget that the most serious diseases of the heart may occasion no murmur. A bad muscle is worse than a leaky valve.

Don't examine the heart through heavy clothing.

Don't give positive opinions after one examination.—*Philadelphia Medical Journal*.

ACUPUNCTURE IN LUMBAGO.—In lumbago and similar myalgias, Sir James Grant inserts 12 or 14 small (No. 8) fine needles into the muscle through the skin for about one-half or three quarters of an inch. He places them about the same distance apart, and leaves them in for one or two minutes. Although before puncture the painful muscles may be hard and tense, they soon relax and become soft, pliable, and painless. The patients, although previously disabled on account of the pain, can walk about freely when the needles are removed. After their removal the skin is sponged, and friction applied with a rough towel.—*Montreal Medical Journal*.

TREATMENT OF BOILS.—Against boils a celebrated dermatologist recommends the following mixture to be painted over the part three times daily:

Ichthyol,	}	aa	3i
Ether,			
Alcohol, diluted,		. . . . .	3ij

In a few hours the inflammation subsides, and in three or four days the furunculi dry up and disappear. When, after a certain lapse of time, there subsists still indurations of the teguments, 1 per cent. of chrysarobin is added to the above solution.—*Paris Cor. Med. Press and Circular*

TREATMENT OF SCIATICA.—Ghetti (*Gazz. degli Osped.*, September 23rd, 1900) in two obstinate cases of sciatica, of many years' duration, has tried with complete success injection of salophen. An aqueous alkaline solution was made, of which each 10 c cm. contained 1 gram of salophen. This was injected into the gluteal muscles every other day. After the sixth injection the pain was materially lessened, and had practically gone after the eleventh. The patients were kept in bed until the fifteenth injection. Thirty injections were given in all, after which the patients, feeling quite well, wished to leave the hospital. They were seen fourteen months later, and had remained quite free from pain for the whole of the time. Salophen is supposed to split up into salicylic acid (of which it contains 51 per cent.) and acetylparamidophenol, when taken into the body.—*B. M. J.*

HYSTERICAL ANKLE CLONUS.—There is a widespread belief amongst medical men that when they meet with a case presenting a well-marked ankle clonus that case is necessarily one of organic disease of the spinal cord. This is, however, not the case; pronounced clonus being occasionally met with in purely functional cases, or even in healthy individuals who have been confined to bed in the horizontal position for a considerable time. This is well seen, for instance, in the case of patients suffering from fractures which oblige them to remain in a recumbent position. What I believe to be an important point of distinction between a clonus due to pyramidal tract degeneration and one due to purely functional causes, is the fact that whilst in the former the clonus can be elicited by simply supporting the foot at right angles with one hand and striking the tendo achilles with the edge of the other; in the latter it is necessary to sharply flex the ankle upon the leg in the ordinary way of eliciting a clonus.

With regard to this subject of functional ankle clonus, Angel Money has an interesting little article (*Australasian Medical Gazette*, August 20th, 1900) in which he lays down a good working rule: "I would say that if an ankle clonus of unvarying intensity, obtained by passive dorsal flexion, lasts thirty seconds, and can be got at any hour of the day and night, over a period of seven days, the presence of organic disease of the pyramidal tracts may be diagnosed with certainty."

He also touches upon the subject of what is known as "Babinski's Sign." In eliciting the plantar reflex the toes are, in a healthy individual, flexed upon the sole of the foot—the reflex is of the flexor type. Occasionally, however, one finds that instead of being thus flexed, the toes are extended in the response—the reflex is of the extensor type. The extension of the toes instead of flexion, is very strong evidence of organic disease of the cord. Money, however, states that "in one case of severe epilepsy of undoubted idiopathic kind, and in two of uræmic convulsions, he has noted a slight but distinct extensor reaction a few hours after the paroxysm had passed away.—*Med. Times and Hospital Gazette.*

HOW TO CURE A COLD.—First, stop eating. The system is overloaded with impurities, and they must be eliminated. Fast until these

poisons can be disposed of in a natural manner. Take long walks, drawing in many deep, full breaths; exercise every muscle of the body, that the circulation may be quickened and every part of the body thoroughly cleansed by this accelerated circulation. Bathe at least once a day, rubbing the surface of the body briskly all over for five or ten minutes.

After missing from two to three meals, if a ravenous appetite is acquired, it is of course desirable to indulge the appetite, but in moderation. Under no circumstances should the stomach be gorged, and those foods which are unwholesome or but moderately nutritious should be avoided.—*Medical Press*.

NORMAL SALT SOLUTION IN DISEASE. — John R. Haynes, in the *Southern California Practitioner* for October, tells us of some of the good effects of normal salt solution in disease. Some physicians add other salines to the normal salt solution, but he believes the plain salt to be best in the proportion of 6 drachms of sterilized salt to one gallon of sterilized water at a temperature of 110 to 120 F. This solution acts as a direct tonic to the sympathetic nerve centres and to the muscles of the blood vessels as well as to the heart itself. It has also a direct germicidal action upon the bacilli in the blood and washes out the toxins and urea from the tissues and the blood. The apparatus is simple; a sterile fountain syringe with a thermometer embedded in its walls, four feet of hose connected securely with a large hypodermic or small aspirating needle. Two to four quarts can be used subcutaneously, but intravenous it should not be more than one pint at the time. The temperature should never be less than 110 F. The great value of this solution has been demonstrated in anemia, cholera, diabetic coma, dysentery, eclampsia, anesthesia shock, gastro enteritis, hemorrhage, peritonitis, pneumonia, poisoning, sepsis, septicemia, syncope, typhoid fever and uremia.—*Charlotte Med. Journal*.

ETIOLOGY AND NATURE OF PUERPERAL FEVER.—From the August 14th number of *La Semaine Gynecologique* we reproduce an abstract of the paper by MENGE and RRONIG, read before the recent International Medical Congress.

Puerperal fever is a term which embraces all microbic infection of puerperal wounds. It is not absolutely necessary for a rise of temperature to be present.

The pathogenic bacteria which can produce puerperal fever are as follows:

1. *Streptococcus pyogenes puerperalis*.
 2. *Staphylococcus pyogenes aureus*.
 3. *Gonococcus Neisser*.
 4. *Bacterium coli communis*.
 5. *Bacillus diphtheriæ*.
 6. *Diplococcus pneumonia*.
 7. Certain miscellaneous anaerobic bacteria.
- Puerperal infection may be heterogenic or autogenic.

By autogenic infection we understand that saprophytes, which were pre-existent in the tissues before labor, have become pathogenic; while in heterogenic infection the germs have been introduced from without.

In gonorrheal puerperal fever a pre-existent gonorrhea of urethra, vagina, or cervix is the source of infection.

The first six bacteria enumerated are never saprophytic in the secretions of the vagina, so that autogenic infection must come from the anaerobic bacteria mentioned in the classification. This autogenic infection can hardly proceed from the tubes or uterus, but should originate in vagina or vulva.

Heterogenic infection is much more important as compared with the other type. Factors which play a prominent role in heterogenic infection are the virulence of the germs, the disposition of the infected individual, and also the number of germs. We know very little about these factors, but it appears to be certain that germs which have existed as saprophytes for a long time are less virulent than those which come from infected tissues.

Metastasis from local infection of the genitals occurs most commonly in connection with infection of the endometrium and placental site; more rarely from the cervix; most infrequently from infected wounds of the vagina and perineum.

Most cases of streptococcus infection of the endometrium are self-limited and recover of themselves; yet this germ has the greatest tendency of any bacterium to go beyond the primary focus.

Pestalozza also read a paper on the same subject before the Congress. During the quinquennium just expired, in which about 4,000 women were confined at the maternity; only 33 required isolation in the special ward provided for these cases, and of this number 30 recovered. No prophylactic vaginal injections were employed nor post-partum douching. On the other hand, 168 women confined at their homes had to be transferred to the septic wards and 23 succumbed to sepsis.

These good results of intramural confinements are explained by the simple precautions of disinfecting the external genitals and sterilizing all objects introduced within the vagina.

Vaginal disinfection before labor should be done only for cause—a gonorrhea for example.

Putrid intoxication as distinguished from sepsis should be guarded against by preventing premature rupture of the membranes; by immediate suture of any vulvar, vaginal, or cervical wound; by judiciously aiding labor while not meddling. All these measures that prevent the persistence of membranous and placental shreds *in utero*.

On no account should any vaginal or uterine douche be resorted to after delivery.

If infection has occurred we must search at once for the point of entry which, we must bear in mind, may be multiple.

The streptococcus is the only germ yet found by Pestalozza in puerperal peritonitis or in metastatic foci. Staphylococci were found only in abscess of the uterine wall after cervical abortion.

Doleris, in a third paper, states that the anaerobic bacteria which

give rise to autogenic auto-intoxication comprise the *b. sepsis communis*, the *b. putridus*, and certain others which are not yet fully determined. These germs are chiefly associated with placental retention.

Association of several forms of bacteria conduces more than certainly to infection.

Autogenic infection has recently received a special interpretation, which is, that there are no saprophytes in the utero vaginal secretions; all germs are pathogenic at all times.—*Obstetrics*.

ICHTHYOL is recommended by Dr. T. G. Lusk (*Post-Graduate*, xv., p. 1007) of the New York Post-Graduate Medical School and Hospital, for relieving the pain and preventing the rupture of vesicles in cases of *herpes zoster costalis*. An astringent, antiseptic drying preparation suitable for the purpose may be made as follows, says the author :

Ichthyol	2 fl. dr.
Magnesium carbonate	2 dr.
Zinc oxide	2 dr.
Water	to make 4 fl. oz.

This mixture should be sopped on and a binder applied to prevent rupture from friction. A 5 per cent. ichthyol collodion may also be used with advantage.—*Pediatrics*.

EFFECT OF SMOKING ON THE COMMUNITY.—Mr. Max Breitung (*Deut. Med. Zeit.*) says that most of the ailments attributed to smoking are due to the simultaneous excessive use of alcohol. Light and medium cigars are rarely harmful. The regular use of from twenty to thirty cigarettes daily cannot be without an evil effect upon the smoker. Cigarettes and cigars should not be sold to minors. Slight deafness and dimness of vision may be attributed to smoking, while the "tobacco heart" and chronic inflammation of the respiratory passages are due to excessive cigarette smoking. Moderate smoking of light and medium cigars and a moderate use of alcohol are advised.

PROPOSED METHOD OF MEASURING TASTE.—MM. Toulouse and Vachide suggest measuring gustatory acuteness by dropping on the tongue titrated solutions of sodium chloride, saccharine, bromide of quinine, citric acid. They recommend to start with solutions so diluted as not to produce any perceptive taste, and to progressively concentrate them up to the limit of perception; the temperature of the liquids must invariably be 38° C., and from two to five minutes must intervene between tests—*Prog. Medical, Pw. Med. Jour.*

TREATMENT OF CONSTIPATION IN INFANTS.—It is better not to give much starchy food to children inclined to constipation. Meat juice and broth are valuable. Fruits, such as oranges, baked apples, stewed prunes, and ripe peaches are desirable aids.

Suppositories are valuable when only a slight stimulation of the

rectum seems to be necessary in order to begin the movement and induce a habit; and the oiled cone of paper is effective in some cases. When this is not sufficiently active, a soap suppository may be used, but this should not be continued too frequently.

Where the feces are hard and dry, I can see no objection to the daily use of small enemata of salt water, or soap and water, or, better still, olive oil. I have found benefit from the use of massage upon the course of the colon, the operation being performed in the direction the contents of the gut should take. I have not relied upon this procedure to the exclusion of other measures.

Medicinal agents are very unreliable in the treatment of chronic constipation in infants and young children, but the temptation is very great to give repeated doses of some active cathartic, that an immediate result may be seen. This does no good and is a very bad practice. An occasional dose of calomel is beneficial when the stools are white, dry, and offensive. *Nux vomica*, to improve the muscular walls of the intestines, is proper.

The best results are obtained by the most careful attention to diet, exercise, and being much in the open air, avoidance of living in superheated apartments, massage, regularity of time for the evacuation, and the squatting posture at the time of defecation without the intervention of chair or seat. This latter, of course, is only available in older children. —Dr. G. W. COOK, *American Journal of Obstetrics*.

THE TREATMENT OF WHOOPING COUGH. — Godshaw (*Medical Progress*, August, 1899) laments the fact that notwithstanding persistent study and experimentation we do not possess any reliable means for cutting short an attack of whooping-cough. The best treatment will do no more than palliate symptoms and diminish the frequency and severity of the paroxysms of coughing. This, however, is very beneficial and frequently essential, especially during the night. An opiate, when carefully selected will yield the desired results without doing harm probably better than any other drug. Papine is the best and should be given in doses of 5 to 10 drops to an infant one year old. Older patients will require proportionately larger doses. The object should always be to lessen coughing that the child may be able to sleep, and not to produce sleep. Some physicians rely chiefly upon antispasmodics—belladonna, bromides, asafetida, etc., but these frequently fail. The inhalation treatment has not proven as satisfactory as was at first hoped. The inhalation of steam is valuable to facilitate expectoration. Careful nursing to avoid complications, and the judicious use of papine will do much to lengthen the interval between fits of coughing even during the daytime, and thus husband the little patient's strength. —*Medical News*.

NOTE ON THYROID EXTRACT IN CRETINISM.—J. H. Musser (*International Medical Magazine*, November, 1900) contributes the following notes on the therapy of thyroid extract in cretinism.

Thyroid extract is of value in cases which may be classed as border-

land cases of cretinism—that is, some features of each case were those of a cretin, but many were lacking, so that it was not a fully developed cretin.

Thomas G—, a child of four, was plump and rotund, but flabby. He seemed vigorous physically. His growth was stunted. His countenance was heavy and abject, his lips thick, his mouth open, and his tongue often partially protruding. No other characteristics about the face. His abdomen was large. He was not apt in learning; he was unclean in his habits. He could not be taught to urinate and defecate properly. He was a rapid, gluttonous eater. He was more irresponsible to questions than normal, and was dull of understanding. He did not understand the reproval of his parents. He could not be trained.

Thyroid extract in one to three-grain doses was given each day. Rapid improvement took place, and in fifteen months he was changed in physical appearance and mental acuteness.

Another, a girl aged nine, was backward mentally. She had thick lips and large, partially protruding tongue, with salivary dribbling. No other suggestions of cretinism in physical appearance of face or trunk. She was unable to read, and indeed to learn the letters. She did not have any memory apparently. In some things she was bright. She was trained with the greatest difficulty into habits of personal cleanliness. She was more peevish and fretful than a cretin, and more childish than idiotic. She improved with the administration of thyroid extract in tablet form, and also of the powder sprinkled on her food. She is now bright, intelligent, and physically robust.

Other cases of partial cretinism not even as far advanced as the above, could be cited, as that of a lad aged six, who was backward mentally, unclean in habits, and subject to violent fits of temper and attacks of causeless diarrhea. He presented no physical appearances of the cretin. He got well with the extract.

It is not necessary to refer to the use of thyroid extract in myxedema and in myxedematous states. Its value in obesity is well known. It is a powerful remedy, and must be used with caution. A daily dose or one every second day may be sufficient. Musser gives one-half to one grain to children, and five to ten grains to adults.—*Medical Age*.

For Neurasthenia.

Professor Lemoine (*Nord Medical*, November 15th) makes use of the following method, giving every two days a subcutaneous injection of from 30 to 75 grains of the following solution:

R Phosphate of sodium.....	45 grains;
Chloride of sodium.....	30 "
Boiled water.....	1,500 "

M.

This dose of the phosphate, though very weak, often acts with great apidity when thus administered. Depression is even replaced at times by exaltation.—*N. Y. Med. Journal*.

The Canada Lancet

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EDITORIAL.

IMPURE BEER.

Many human ills and much misery has been charged to the consumption of alcoholic beverages, but the most imaginative advocate of total abstinence probably never dreamed of dangers so real as those that have recently in England been definitely traced to the use of beer contaminated with arsenic. These disclosures will probably have more deterrent effect on consumers of alcoholics than many lectures on temperance, at least until the purity of the beverage is definitely assured. A remarkable epidemic of peripheral neuritis with many deaths has been shown to be caused by the use of beer in the manufacture of which, on account of greater cheapness, glucose was used in place of barley malt and hops. An investigation of the matter by competent men, with analysis of all the materials used in the process of manufacture, has shown that the sulphuric acid used in making the glucose contained a large amount of arsenic,—as much as 1.4 per cent. by weight of arsenious acid—which substance was also found in smaller quantities in the glucose and in the

beer made from it. In the vicinity of Manchester about one thousand cases of poisoning from this cause have come under the observation of, or have been reported to, the medical health officer, Dr. Niven. The symptoms presented were usually those of indigestion, associated with nausea, vomiting, epigastric pain, sometimes diarrhoea, coryza and oedema of the eyelids, ulceration of the gums or fauces, paralysis, neuralgia or anaesthesia, loss of hair or nails, and various skin lesions such as pigmentation, bullous or erythematous eruptions, etc. All the persons affected were habitual, but by no means always immoderate beer drinkers.

The satisfactory clearing up of the cause of this epidemic reflects much credit on Dr. Niven and his associates. It is a triumph for preventive medicine which will particularly appeal to the public mind. Already it is said to have greatly strengthened the agitation for pure beer in England—the advocates of which insist that beer be defined as a substance made from “barley malt, hops, yeast and water.” Beverages manufactured from other materials may be sold but not under the name of beer. As the greatest beer drinking country in the world, it is a matter of importance that the article supplied should be pure and wholesome.

THE WAR IN SOUTH AFRICA.

A recent statement by the British War Office shows the following mortality among officers and men engaged in the war against the Boers:

Killed in action or died of wounds, 404 officers and 4,070 men, or in the proportion of one officer to ten men. Died of disease, 163 officers and 6,566 men, or in the proportion of one officer to forty men. During the campaign 15,642 cases of typhoid fever occurred, with 3,625 deaths, or a mortality of over 23 per cent.

It would thus appear that while officers are exposed to greater danger from death in action, the men run a much greater risk from disease. This must be largely accounted for from the fact of the better hygienic surroundings of the officers lessening the incidence of the disease among them, and probably more favourable conditions for treatment and better care increasing their chances of recovery. A mortality of 23 per cent.—about three times as great as what obtains in civil hospitals under present methods of treatment—will appeal to most physicians as rather high. Recent wars have taught the lesson that the role of the physician and medical sanitary officer is much more important than that of the surgeon in looking after the welfare of the troops. The old “army surgeon,” who considered it his duty to lop off limbs, has passed away with the dawn of conservative aseptic surgery and preventive medicine. A number

consulting physicians with the British forces in South Africa would probably have been able to render services more valuable even than those rendered by the consulting surgeons sent out by the War Office

SHOULD BE REMEDIED.

"Among the many curious discoveries made during the war, not the least interesting is that the War Office is unable to recognize any medical degree not obtained in this country. Surgeons of the highest standing in Canada, and holding commissions from Her Majesty in the militia, volunteered for service in South Africa, and a complete field hospital was offered by Canada, but in both cases the War Office refused to accept such service on the ground, forsooth, that it was "contrary to the Medical Act of 1858," to permit a colonially-trained surgeon to attend professionally to British troops. England was, therefore, required to find surgeons for the whole British army, colonial and home-born! Such an Act as that referred to may have been very necessary 40 or 50 years ago, but a great advance has been made in medical education throughout the Empire, and especially in the self-governing colonies, since that date. An attempt is, therefore, to be made—or rather repeated, since the first steps were taken last session—to induce Parliament to amend the obsolete Act of 1858, so that properly-qualified medical men in the colonies may be admissible to serve the Empire in the naval, military and civil services of the Crown. There ought to be no difficulty in securing this alteration, unless the British medical profession offer strenuous opposition."—*Naval and Military Record*.

Some of the statements made in the above are scarcely in full accordance with the facts of the case, as the various Canadian contingents were accompanied by their own medical officers, and Canadian graduates filled other medical posts during the war; whether they were technically eligible or not, we are not prepared to say. Certainly any legislation which places the medical branch of the colonial service at a disadvantage is unfair, and should be remedied. We are glad to see the cause of the medical profession championed from such a quarter.

HOSPITAL FOR SICK CHILDREN.

The debt on the Hospital for Sick Children has been reduced through recent contributions from those interested in the institution by over \$9,000, leaving a balance of some \$10,000 to be paid off.

An official statement recently issued shows the daily average of pat-

ients in the institution during the past year was 111½. During the 25 years of the hospital's existence, over 40,000 children have received treatment. During 1900 the total income was \$56,116, and the expenditure \$36,274, and at the present time the assets of the institution are estimated at \$215,180. Altogether the Hospital for Sick Children is one of the best equipped, best appointed, and best managed institutions of its kind in the world, and as such is deserving of the sympathy and most cordial support of the medical profession and the public of Toronto and the Province of Ontario. For its efficiency and its altogether satisfactory condition the credit is due, practically, to one man alone—J. Ross Robertson, Esq., the Chairman of the Board of Trustees. He has given freely of his own time, money and influence to this charity, which will stand for all time a monument to his public spirit and philanthropy. Montreal and other cities may have had larger donations to their hospitals from multimillionaires, but for personal interest and devotion to the welfare of a deserving charity, no institution has ever received better service than the Hospital for Sick Children, Toronto. In season and out of season, through adversity and prosperity, Mr. Robertson has been a steadfast friend—a father in fact—to the institution. The matter of expense has never been allowed to stand in the way of anything that would increase the efficiency and usefulness of the Hospital for Sick Children. In the interests of the medical charities of our city, it is to be hoped that some others among our wealthy residents, may take an example by Mr Robertson's splendid munificence and zeal.

EDITORIAL NOTES.

Mrs. Eddy's Troublesome Tooth.

At the recent Protestant Episcopal Church Congress, Mr. W. A. Purrington, in the course of a criticism of Christian Science and its founder, Mrs. Eddy, remarked:

"She says there is no pain and disease, and that she can restore decaying bones to a healthy condition: yet she had her teeth extracted by Dr. Fletcher, of 77 North Main street, Concord, N. H., under the so-called painless method, by local anæsthesia, and she now wears artificial dentures made by him."

In *The Christian Science Sentinel* (December 6), Mrs. Eddy claims that this is an almost total misinterpretation of her position. She prints a statement from Dr. Fletcher saying that while Mrs. Eddy did have a "troublesome tooth extracted," it was not a carious tooth, neither was she in pain at the time. "She did request me to extract the tooth, allowing me to use my own painless method for extracting teeth, which I had recommended." Mrs. Eddy thus explains her metaphysical position in respect to surgery and other physical aids:

"Those familiar with my writings know that long ago I instructed Christian Scientists not to interfere with methods of surgery, but, if they should call a surgeon, to submit to his methods without discussion. Those who are unfamiliar with them, or misconstrue them, should hesitate to criticise without personal knowledge. The following is extracted from the *Christian Science* text-book, page 400, and has been published in said book since its first issue in 1875: 'Until the advancing age admits the efficacy and supremacy of Mind it is better to leave surgery and the adjustment of broken bones and dislocations to the fingers of a surgeon, while you confine yourself chiefly to mental reconstruction and the prevention of inflammation.' I have always instructed students in Christian Science to be wise and discreet, conforming, where conscience is not offended, to the usages of men. The practice of surgery is not introduced into Christian Science, whose rules and methods are based upon the examples of Jesus and His followers. Bishop Berkeley and I agree that all is Mind. Then, consistently with this premise, the conclusion is that if I employ a dental surgeon, and he believes that the extraction of a tooth is made easier by some application or means which he employs, and I object to the employment of this means, I have turned the dentist's mental protest against myself, he thinks I must suffer because

his method is interfered with. Therefore his mental force weighs against a painless operation, whereas it should be put into the same scale as mine, thus producing a painless operation as a logical result.

"Matter is but the objective state of mortal mind. It has only the substance and reality in our day-dreams that it has in our dreams by night. It is all the way the Adam-dream of mind in matter, which is mortal and God-condemned; it is not the spiritual fact of being. When this scientific classification is understood we shall have one Mind, one God, and we shall obey the commandment, 'Love thy neighbor as thyself.'"—*Literary Digest*.

No doubt this clear and scientific explanation of why she used a local anæsthetic, or why she had the tooth removed at all—since neither pain nor tooth have any existence—will appeal to and satisfy such minds as can believe her system. There is nothing except Mind, still Mrs. Eddy never neglects to collect the non-existent dollars which have made her a millionaire, nor to apply anæsthetics to relieve non-existent pain when she is the victim.

The surgeons will, no doubt, be glad to learn that she has no desire to interfere in their province. She surely places a limitation on Divine power as interpreted by Christian Scientists, if it is not applicable to surgery, but perhaps badly set fractures are too apparent for even the most devout and addle-pated of her followers to believe their non-existence.

A Woman's Hospital.

A meeting of those interested in the medical education of women was held in Toronto a short time ago, for the purpose of taking action looking towards the establishment of a hospital in the city, under the control of lady physicians. It is claimed that at present lady members of the profession are not accorded equal clinical advantages with men, and the proposed step is to obviate the difficulty. Toronto is certainly not suffering from any want of hospital accommodation at present, and the establishment of another institution will only further subdivide the scanty support now given to the various medical charities of the city, and will make keener the rivalry for patients among these institutions. This can not be in the interests of the city as a centre for medical education, nor of the medical profession as a whole. We hope the profession and the public will be spared the advent of another ill-supported, unnecessary, hospital in the city, clamoring for free patients, and attempting to pauperize the community. Let the women be given equal rights and fair play in existing institutions, but let us avoid the ever growing evil of the unnecessary multiplication of medical charities.

Doctors in Parliament.

Eighteen doctors have been elected members of the new Dominion parliament. Among the few conservatives who escaped the landslide in Quebec, we are gratified to see the name of Dr. Roddick. It would have been a distinct loss to the medical profession of Canada had he been defeated, especially when the efforts to establish a licensing board for the Dominion are within a measurable distance of success. Dr. Roddick has given much time and has shown energy and ability in overcoming the difficulties in the way of this scheme, and has rendered a public service in the interests of not only the medical profession, but the community at large, deserving the highest praise.

Trinity men who served in the War.

The following is a list of the graduates and undergraduates of Trinity Medical College who served in the war in South Africa, together with their rank and corps:—Lieutenant-Colonel G. Sterling Ryerson, M.D., A.M.S., Red Cross Commissioner; Major Fred. H. Brennan, M.D., A.M.S.; Captain Francis L. Vaux, R.A.M.C.; Lieut. L. E. Wentworth Irving, M.D., R.C.A.; Civil Surgeon H. S. Roberts, M.D., A.M.S.; Civil Surgeon John Percival Lea, M.D., A.M.S.; Civil Surgeon Ed. S. Worthington, M.D., A.M.S.; Howard G. Barrie, Y.M.C.A. Representative; Hospital Sergeant S. J. Farrel, M.D., R.C.D.; Hospital Corporal W. J. Macdonald, R.C.A.; Gunner W. T. Robertson, R.C.A.; Private A. H. Anderson, R.C.R.; Private W. M. Love, R.C.R. Can any Canadian College show a longer list?

Certificates Commending Drugs.

The University of Edinburgh have expressed disapproval of the granting of laudatory testimonials of drugs and proprietary remedies by their graduates. Formal disapproval of this practice from so high a quarter will, no doubt, have a salutary effect, and we may hope to see other institutions take similar action. It is quite too common an occurrence to see the names of well-known members of the profession appended to certificates used for advertising purposes.

PERSONAL.

Dr. Harold Anderson, of Ottawa, has been appointed Medical Quarantine Officer at Williamshead Station, B.C., to succeed Dr. Higgins.

Miss A. J. Scott, a graduate of the Toronto General Hospital Training School for Nurses, and for some years in charge of Dr. Temple's private hospital, has been appointed assistant lady superintendent of the Royal Victoria Hospital, Montreal.

Dr. J. H. Elliott, formerly superintendent of the Gravenhurst Sanitarium, has returned to his home in Bowmanville from the west coast of Africa. Dr. Elliott was one of the Medical commission sent out from the School of Tropical Medicine in Liverpool, to study the relationship of mosquitoes to malaria in the Congo.

Dr. Ivan Senkler, of Vancouver, son of the late Judge Senkler, of St. Catharines, was married on Dec. 20th to Miss Leila McKay, daughter of Donald McKay, Esq., of Toronto.

Dr. D. M. Anderson, formerly surgeon on R.M.S. Empress of India, has been appointed to a similar post on the transport Salamis. Dr. Colin Campbell succeeds him as surgeon on the Empress of India.

Dr. Dean and Dr. Stewart, formerly of the resident staff of the General Hospital, visited Toronto recently. Dr. Dean is practising at Fort William and Dr. Stewart has just returned from England.

Dr. Geo. M. Gould has resigned the editorship of the Philadelphia Medical Journal.

Dr. H. H. Alger, of Frankfort, and Dr. T. C. Carlaw, of Campbellford, both graduates in 1893 of Trinity, have recently taken unto themselves wives. THE LANCET tenders congratulations.

OBITUARY.

DR. RICHARD THORBURN.

A prominent member of the medical profession in Ontario, passed away on Dec. 10th, in the person of Dr. Richard Thorburn of Colborne. The deceased was a son of the late David Thorburn, at one time M. P. for Lincoln, and brother of Dr. James Thorburn, the well-known Toronto physician. He was born at Queenston in 1839. He received his medical education at Toronto University and Oxford, and after graduation began practice at Queenston, but removed to Colborne some fifteen years ago where he continued his professional work until shortly before his death

The deceased, who was widely known, was held in the highest esteem both for his personal qualities and as a physician

Dr. David Nelles, who practiced for 18 years at Thornhill, Ontario, died at Grace Hospital, Dec. 23rd, 1900, at the age of 45 years. Dr. Nelles received a severe injury some two years ago, from which he never fully recovered

Dr. Fenwick, a well-known Kingston practitioner, died recently from septicaemia from being infected through paring a corn on the foot.

BOOK REVIEWS.

Operative Surgery. By Joseph D. Bryant, M.D., Vol. I, Third Edition, New York, D. Appleton & Co.

To those who have known Dr. Bryant as a teacher of surgery and as an operator of the largest experience and highest skill the announcement that a new edition of this work was in preparation would at once raise the expectation of a valuable addition to surgical literature.

In a rare degree the successive editions of this work have reflected the individuality of the operator, and every procedure advised has been subjected to clinical tests of the most searching kind.

There are surgeons not a few who can operate beautifully, but whose judgment regarding surgical matters is faulty to the last degree. There are surgical teachers who can reason admirably, but who simply cannot operate. Dr. Bryant is a close observer, a logical reasoner and a brilliant operator, and by virtue of this is exceptionally fitted for undertaking the preparation of a work on operative surgery.

Thoroughly up to date in every section, the work has in English at the present time only two competitors, these being, the comprehensive and excellent volume by Mr. Jacobson of London and the *Manual of Surgical Treatment* by Cheyne and Burchard, now in process of publication.

The work before us deals with operations generally, the surgery of the circulatory and nervous systems, operations on tendons, ligaments, muscles and bones, amputations, the treatment of deformities and plastic surgery.

No one in active surgical practice, or called upon to do surgery under emergencies, can possibly regret the purchase of this work, or fail to be benefited by a careful study of it. It goes without saying that a medical publication from the press of the Appleton Company would be a pleasure to the book-lover, and a credit to the firm which has given us within recent years so many sumptuous and beautifully illustrated medical publications.—N. A. P.

TAYLOR ON GENITO-URINARY AND VENEREAL DISEASES AND SYPHILLIS.

The Pathology and Treatment of Genito-Urinary and Venereal Diseases and Syphilis, By Robert W. Taylor, A.M., M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. New (2nd) edition. In one very handsome octavo volume of 720 pages, with 135 engravings and 27 full-page plates in colors and monotone. Cloth, \$5.00, net; leather, \$6.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This work is so well and favorably known to the profession that an extended review is unnecessary. It represents the most advanced ideas and the soundest teaching on the subject with which it deals. The author has eliminated much useless material, descriptions of obsolete operations, tedious details of rare conditions and has presented a concise though sufficiently complete work dealing with all that is practically useful to the practitioner. Urinalysis, anatomy, bacteriology and other departments of the work now fully taken up in treatises devoted to them especially, are discussed briefly and only in so far as is necessary to make the work practically complete. The author has wisely devoted almost the entire space to matters not dealt with elsewhere and has thus avoided needless padding, and over-lapping of other works. Altogether the treatise is deserving of the most unqualified commendation.

PROGRESSIVE MEDICINE.

Editors: H. A. Hare, H. R. M. Landis. Lea Bros. & Co., Philadelphia and New York. Vol. IV, December, 1900.

This volume does rather more than preserve the standard set by preceding numbers. The contents alone should tempt any purchaser. Padding is absent and the condensed result of most modern views and methods are readily obtainable by the reader. Einhorn has a resumé of diseases of the digestive tract and allied organs, liver, pancreas, peritoneum. Bloodgood of Johns Hopkins, supplies a most helpful and stimulating series of papers on fractures, dislocations, amputations, surgery of the extremities, and orthopedics, constituting perhaps the bulk of the volume, pages 91-222. The paper on surgery of joints and bones appeals strongly to the reviewer, particularly the resumé given of orthopedics of rare origins.

Diseases of the kidneys are treated of in most modern fashion by Bradford of University College, London. Physiology, hygiene, genito-urinary diseases, and syphilis, are in the hands of Brachbaker, Baker, and Belfield respectively. The volume ends with a most useful "Practical Therapeutic Referendum" by Thornton of Jefferson College, in which all the modern serums and synthetic compounds of any notable value are dealt with sufficiently in *extenso* to make the article a valuable one for reference.—J. T. F.

SYP. HYPOPHOS. CO., FELLOWS

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The Essential Elements of the Animal Organization—
Potash and Lime ;

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Its Action is Prompt : It stimulates the appetite and the digestion ; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS" As a further precaution it is advisable to order in original bottles.

FOR SALE BY ALL DRUGGISTS.

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WHOLESALE AGENTS

MONTREAL

The 1901 issue of the Physicians Visiting List (Messrs. Blakiston, Son & Co.) is at hand.

The plan suggested for recording of visits is simple and useful; there is also space for engagements, addresses, cash account, etc. The early pages of the book are devoted to description of the metric system of weights and measures, tables of dosage, directions for comparing the different varieties of thermometers, and a table for working out the period of gestation.

The book is attractive both in appearance and utility.—H. C. P.

PUBLISHERS DEPARTMENT.

THE PREDATORY MOSQUITO.

Every physician who "keeps tab" on the advances and discoveries of medical science is now aware that there are two kinds of mosquitoes—the good and the bad. We presume, however, that some one will dispute this statement, and say of this insect as the average army officer says of the Indian, "There's no good mosquito but a dead mosquito." It's true that they all sting, but some of them add insult to injury by injecting the malarial virus into her unsuspecting victim. We say *her* because we believe the male mosquito is a better behaved insect than his spouse and does not "present his little bill" at inconvenient times.

These few remarks are not but prefatory to the announcement that THE PALISADE MFG. CO. has prepared and is now mailing to physicians an illustrated folder, showing in sepia the distinctive differences between *Culex* (the non-malarial) and *Anopheles* (the malarial) mosquito, with instructions as to how to detect the good insect from the bad. A copy will be mailed to any physician who has not as yet received one.

JOS. WESLEY MALONE, M.D., Blythedale, Pa., says: I am so well pleased with CELERINA that I cannot refrain from citing several cases of interest I prescribed it very frequently, and have never had it to fail yet. I used it in a case of cholera. The patient was a little girl, ten years old, suffering from an acute attack. The case had been given up by two physicians and was a very bad one. The usual remedies, phosphorus, arsenic, etc., had been used and had no great effect. I advised the attending physician, an old practitioner, and a good one, too, to try CELERINA. He did not take much to the idea, but after urging him he consented, and the first dose gave relief. From that time, the child got better, and in about four weeks was cured. It acted like a charm, and the old physician, who had never used it, was so well pleased, that I am sure he will try it again. I have prescribed it in nervous prostration and have yet to find it to fail. It is pleasant to take and produces no nauseating effects, as other remedies do when used for some time. I frequently prescribe it with ALETRIS CORDIAL, and it also goes well with Peacock's Bromides. I shall continue to prescribe it, and shall watch its merits closely.

THE CANADA LANCET

VOL. XXXIV. TORONTO, FEBRUARY, 1901.

No. 6.

ORIGINAL ARTICLES.

AN HISTORICAL SKETCH OF CANADIAN MEDICAL EDUCATION.

By WALTER B. GEIKIE, M.D., D.C.L., Dean of Trinity Medical College, Toronto.

(Continued from January issue.)

The Medical Department of Bishop's College. This Medical School was organized in Montreal in 1871. Its first session was held in 1871-2 and Dr. (now Sir William Hingston) was the first Dean. The school was first carried on in the third story of Barron's building on the northeast corner of McGill and Notre Dame streets, and its first class numbered in all 25 students. The next session was held in a new building specially erected for it, and was opened by the present Dean, Dr. F. W. Campbell. At great personal expense the Faculty—giving up all that they had earned by teaching for College purposes, with but a single exception where the teacher's whole time was occupied by his work, and with a devotion to duty such as is seldom met with but in members of the Medical profession—have now got a good, growing, and well-equipped Medical School. If the same energy is continued in the future which has characterized its past history, its prosperity cannot fail to be sure and lasting.

The Laval School of Medicine and Surgery. The Medical Faculty of Laval University has had nearly 60 sessions, having been founded 1843. It is a French School and was first incorporated in 1845. From 1867 to 1891, it was connected by mutual arrangement with Victoria University as its Medical Faculty in Montreal, but in the latter year became the Medical Department in Montreal of Laval University. Its students in all classes now number from 280 to 300 each year. The School is doing good work and is prospering. It has, like the other Canadian Medical Colleges, a large Faculty—well-equipped and up to the present day requirements in its teachings. The Faculty of Medicine in Quebec is also connected as its Medical Department in that City with Laval University. The instruction is all given in French, and it too, is doing good work and has good classes.

Medical Education in Nova Scotia. In December, 1867, a meeting of Medical men in Halifax was convened and, after full consideration of the desirability of establishing a Medical School in that city, it was decided that a course of lectures should be given during the coming summer, and that Dalhousie University should be asked to recognize the course thus given. In 1868 the first annual announcement was issued and the School was definitely recognized as the Medical Faculty of Dalhousie University. The Hon. W. J. Almon, M.D., was its first presiding officer. The intention at first was simply to supply a preparatory course of instruction, and the granting of degrees was not proposed. But in 1870 it was decided to fill the final chairs and to establish a regular full course of from four to six months' sessions, and in future to grant the degrees of M.D., C.M. During the following session of 1870-1, 26 students were in attendance, and in 1872 the first graduates (5) were sent out.

In 1875 the Faculty erected a new building near the Provincial and City Hospital and the Poor Asylum. In order to secure the definite ownership of its property, it separated from the University, and obtained an Act of Incorporation as "Halifax Medical College." The College was empowered to grant degrees in Medicine and Surgery and the Allied Sciences. In 1876 the College sent out its first two graduates under its new name. In 1877 it became affiliated with the University of Halifax which the Legislature had constituted as a Provincial University and which examined candidates and conferred degrees in the various Faculties. This University lasted only a few years. Matters went on nicely till 1885 when a Hospital difficulty arose which ended in the resignation of the entire Hospital staff—and this led to the Medical College closing for a time. Just prior to this difficulty, the College had become affiliated with Dalhousie University, which institution gave the instruction in general and practical Chemistry and in Botany, to the students. To these subjects Physiology was added and the course was given by the teacher of that subject in the Medical College.

It was hoped that the Hospital difficulty would be settled, and the regular full Medical College work soon resumed. At length, in 1887-8, the School re-opened for instruction in the primary branches only. In 1889-90 the trouble was so far arranged to as admit of teaching in the final branches being recommended—and the class that year numbered nineteen in all. Since that time the progress has been uninterrupted and the class has grown so large that soon, a good number of students were in attendance. The Government of the Province had given a small grant to the Medical College, to retain which, the affiliation with Dalhousie University had to be given up, and the Faculty reverted therefore to the former independent position. Dalhousie University appointed the Examiners in all Medical subjects, and the Medical students of the College have, since 1890, gone up to the University for their Examinations and degrees. Associated with the Medical Faculty of the College is a Faculty of Pharmacy, but few Druggists have as yet gone up for their degrees. As a rule they take the examinations of the Pharmaceutical Association.

Canadian Medical Legislation. I desire now to trace as briefly as possible the Medical Legislation in Canada during the past thirty-seven years. For a long time prior to the passing of the Ontario Medical Act as it now exists, the old Medical Board of Upper Canada (Ontario) was the general licensing body of the Province. As teaching Medical bodies gradually increased with the increase of population, the desire naturally became stronger and more general on the part of students to graduate in Medicine rather than to be as heretofore content with a Provincial license. A medical degree obtained from a British or Colonial University entitled its holder to a license, and at least one of the incorporated Medical Schools had obtained the legal right to examine and issue its certificate to successful candidates, and this carried a license with it. Two other licensing Medical Boards had sprung up, conducting their examinations under special Acts. One of these was the "Homœopathic" and the other the "Eclectic" Medical Board. The former came into existence in 1859, the latter in 1861.

With such an increase in the number of licensing bodies of one kind and another, it was self-evident that no little danger was likely to arise from a certain amount of competition, which would be inevitable whatever efforts might be made to guard against it, and would tend to make the obtaining of a license easier than had hitherto been the case. The members of the profession justly feared that the standard of Medical training was likely, if not certain, to be lowered rather than raised under such conditions. This had been wonderfully well maintained so far. But now, prominent Medical men, teachers for the most part, asked, whether it would not be very advantageous to have a central Medical Board established, before which, and wherever educated, all candidates for license should have to be examined? This question admitted of but one reply, and that was in the affirmative—provided that such a Board could be so constituted as to inspire perfect confidence in its absolute impartiality as between the various graduating and teaching medical bodies. It would undoubtedly be a great boon in such case. As might have been expected, however, the first suggestions made, and sought to be passed through the Legislature, were very crude, and were on this account strongly opposed by many who entirely believed in the Central Board principle.

In 1866, "Dr. Parker's Bill," as it is called, was passed. This was the first Act passed since that which had been many years before disallowed, viz., that for the incorporation of the Medical Profession as the College of Physicians and Surgeons of Upper Canada. Dr. Parker's Bill established a Council of Medical Education and Registration for the Province, consisting of twelve elected territorial members, and one representative chosen by each graduating or teaching Medical body then existing or hereafter to be organized. All persons licensed under Upper or Lower Canada Acts at the time it was passed, were entitled to registration. The duty of the Council was to lay down the Medical curriculum for the Medical Colleges, the graduates of which would be entitled to registration. Candidates who had not attended Canadian Colleges had to show that they had completed the curriculum as ordered, and to be examined by a Board appointed by the Council.

But this Bill left the Homœopathic and Eclectic Examining Boards untouched and free to continue their work of examining candidates periodically. This circumstance alone, gave Upper Canada three licensing bodies where one only would, it was believed, give a much better guarantee to the Profession, and to the public, of the fitness of those passing it. In some other respects this Bill of 1866 was unsatisfactory. In 1869 it was repealed, and "The Ontario Medical Act" was passed. Under this Act the great change was made of giving the Homœopathic and Eclectic bodies representation on the Council.

The several Universities and Medical teaching Colleges also, in consideration of each having one representative on the Council, agreed to give up their licensing power. The great aim of making a Central Medical Board appointed by the Council possible, had thus been attained, and a good uniform curriculum might reasonably be expected as the result. It was clearly understood, and in some cases provided by law, that the teaching Colleges would be represented on the Board, and that provision would be made for the examination of Homœopathic candidates by a special Examiner on the few subjects wherein this was thought necessary. By the amendments introduced into the Act in 1874, the Eclectic body was merged in the general profession and its special representation on the Council and Board of Examiners was no longer called for. The Act was still further amended in 1887. 1891 and in 1893. It now regulates all Medical educational matters as regards the curriculum to be followed by students who intend to live and practice in Ontario—from matriculation to the end of the course of study.

The entrance or matriculation examination of the Council has been gradually raised until a certificate is now required to be presented to the Registrar for each candidate for registration as a Medical student, showing that the examination conducted by the Education Department on the course presented for matriculation in Arts, which must in all cases include Physics and Chemistry, has been passed. Graduates in Arts are exempt from this requirement under the Statute. A certificate of having attended one course in Arts in a British or Canadian University, and of having passed the examinations required at its close, entitles to registration.

The Medical curriculum extends now over a period of five years. Four winter sessions of eight months each, with the usual twenty-four months of Hospital attendance, etc., etc., are required. The fifth year must be spent either all in Hospital and practical work and study, or six months of it with a Medical man, and the other six at College or practical Chemical and Hospital work. The Ontario Medical Council's Examining Board examines candidates in Toronto and in Kingston twice a year, in the spring and in the autumn.

IN QUEBEC.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC is an incorporated Board with somewhat similar though not such extensive powers as those possessed by the Ontario College. The preliminary requirement is an examination in English, French, Latin, geography, literature, botany,

chemistry, natural and moral philosophy. The curriculum extends over four years, and includes four winter courses of lectures at a recognized Medical College, and the examination of candidates in the subjects, primary and final, as laid down in the curriculum. Assessors are appointed by the Provincial Board to attend the examinations of the various Colleges and to report to the Board the character of these examinations. These Assessors are not appointed from the Professors in any one of the Universities or Incorporated Medical Schools. An unfavourable report regarding the examinations of any teaching or examining body may lead to the refusal of license and registration for its degrees or diplomas until the examinations have been amended.

IN MANITOBA.

The Medical profession was first incorporated in Manitoba in 1871. The Act was amended in 1877, and again in 1886, in which latter year the executive body was called "The Council of the College of Physicians and Surgeons." The Act was further amended in 1889 and 1890. There are eleven territorial members. Manitoba College has three, and the Homœopathic body one. Any Medical College in Manitoba in affiliation with the University of Manitoba, or which may hereafter be organized, is entitled to two representatives. The University of Manitoba is, under the Act, the sole examining body for registration in the Province. As educational institutions multiply with the increase of population the examining body will probably be modified, but at present the examining power is in the hands of the one University in the Province, under the Manitoba Act. A full curriculum is laid down by the examiners which all candidates must have completed.

IN BRITISH COLUMBIA.

The British Columbia Medical Council was organized by a Medical Act passed in 1886. This council registers any one from any medical school or college, and requires a four years' course of study to have been pursued, the holder of a certificate being required to identify himself as the person named in it, and to undergo before the members of the council a satisfactory examination. The Act was amended in 1893 in regard to the registration of persons registered under the Medical Act of Great Britain. The examinations embrace the ordinary branches of medical science.

IN THE NORTH WEST TERRITORIES.

The first legislation affecting the medical profession in the North-west Territories was passed in 1885, and the profession was incorporated as the Council of Physicians and Surgeons of the North-west Territories in 1888. The Act was amended in 1890-91-92-94. The requirements for registration are somewhat similar to those of the British Columbia Medical Act. The Act recognized only diplomas obtained after a four years' course of study in recognized colleges or medical schools, and required identification in each case of the party as the one named in the diploma, and the passing

of a satisfactory examination. Appended to the North-west Territories' Medical Register is an excellent code of medical ethics—an addition which would be a great advantage to every register.

IN NOVA SCOTIA.

The first Medical Act in Nova Scotia was passed in 1828, and from that year to 1856 the legal requirements of a medical practitioner were the possession of a regular diploma or other recognized equivalent certificate of qualification, or securing after examination a license from the Governor of the Province. This is known as the "Old Provincial License." Military and naval surgeons, and persons in practice prior to 1821 were exempt from the provisions of the various medical Acts. From 1856 to 1872 the above qualifications had to be only registered, by being compared with a register kept in the office of the Provincial Secretary. Licenses given without examination, or to those who were examined, were also registered. And there was a penalty of £5 exacted for practising without registration. Even up to this time registration was in charge of a layman, and occasionally from this cause, fraudulent diplomas were registered without their character being known. Instances in point are those issued by the notorious Buchanan of Philadelphia.

From 1872 to 1897 an Examining Medical Board was in operation, and a Medical man appointed registrar and secretary. In 1884 this Medical Board which had consisted of only nine members was increased to thirteen, and in 1885 prosecutors were appointed to carry out the penal clauses of the Act against unqualified practitioners. Matriculation or preliminary examinations are held twice a year at various places in the Province simultaneously, and the papers are valued by the Examiners of the Board. Professional examinations are held by the Board only where the qualifications presented by the candidate are considered defective. The successful candidates receive what is now known as the License of the Provincial Medical Board. To Dr. Lindsay, of Halifax, the able Secretary of the Medical Board of Nova Scotia, I am indebted for a very full account of the history of Medical legislation in his Province, of which the space at my disposal only admits of my giving this very condensed synopsis, but it may be full enough to show that in Nova Scotia, as in the other Provinces, very creditable progress has been, and is continually, being made in Medical education.

IN NEW BRUNSWICK.

The New Brunswick Medical Act was passed in 1881, and amended in 1882, 1884 and 1895. To be included in the Register of the Council of New Brunswick, the Council must be satisfied that the applicant has duly passed the matriculation examination and that he has afterwards spent four years at a University, College or Incorporated Medical School. These courses must have included the usual curriculum of primary and final studies, Hospital attendance, etc., by the student, and prior to his receiving his diploma or his degree—which he is required to personally present and to identify himself as the person named in it—he must have passed satisfactory examinations requiring attendance at a four years'

graduated course before the examinations can be fully taken. He may, if he has taken the required course without graduating, undergo examination before Examiners appointed by the Council.

IN PRINCE EDWARD ISLAND.

The Medical Council of Prince Edward Island was created by the Medical Act of the Province passed in 1892. The Act prescribes a good matriculation examination to be undergone by all persons who are neither matriculants, graduates in Arts, nor holders of license as first class teachers. The Medical course required is four years, and is essentially similar to the requirements in New Brunswick. An examination has to be undergone before the Council to test the candidate's fitness to practise his profession.

The question is now being discussed at meetings of some of the great Medical Societies in the older Provinces, and notably by the "The Canada Medical Association," whether the time has not arrived when a general standard of Medical examination may be laid down and accepted by all the Provinces, so that passing and registration in one Province of the Dominion may entitle to registration in any other in which a Medical man may desire to settle. As yet, however, discussion of the subject is not yet finished. It is sure to be considered fully in the near future. It will be seen by the foregoing sketch, which might have been greatly extended, did space permit, that Medical education has made great progress in every part of the Dominion, from comparatively small beginnings. During the last fifty years in the vast territory now known as the Dominion of Canada, it is creditable to find that even in its most recently organized Provinces and Territories regulations are laid down and carried out enforcing such a Medical education as secures for the public, as far as any law can do so, a sufficient supply of well-educated physicians. This is an advantage which can be best appreciated by comparing localities thus favoured with others where no such provisions exist; and this sketch may very well close by expressing the writer's gratification at being able to record the present high position of the Medical profession in Canada as being something of which the entire Dominion may be justly proud. I have to acknowledge with thanks the indebtedness for some of the facts given in this short sketch to Dr. Canniff's work on "The Medical Profession in Upper Canada." Also to several of the Deans and Secretaries of Medical Colleges, and Registrars of Medical Councils and Boards, etc., for information bearing on Medical education in different sections of the Dominion.

ANEURISM OF THE DESCENDING PORTION OF THE ARCH OF THE AORTA—RUPTURE.

HAROLD C. PARSONS, B.A., M.D., M.R.C.S., Eng., L.R.C.P., Lond.

I was recently asked to investigate the cause of death in a man who had died suddenly without apparent reason. He had enjoyed comparatively good health and no serious condition had been suspected during life. Examination revealed a thoracic aneurism which had ruptured into the posterior mediastinum. The case presents several points of interest. It is one more to be added to an already long list of unrecognized thoracic aneurisms. The fatal syncope being associated with an attack of vomiting, gave rise to suspicion of poisoning, and it became a medico-legal case.

As will be seen, however, the most striking feature is the course taken by the extravasated blood. It has been tersely said that aneurisms of the ascending portion of the aorta arch are the aneurisms of physical signs, those of the transverse portion are the ones of symptoms, whereas those of the descending thoracic aorta are the aneurisms of neither signs nor symptoms. This same idea as applied to the last group has justified the term "latent aneurisms." The case we present, however, can hardly be placed in this category, as it did give rise to symptoms, however vague they may have been, but as to physical signs we have no record.

The patient was a man of 50 years of age, full blooded and well nourished. There was a history of syphilis and of alcoholism, but beyond that I am unable to obtain facts of his previous history. His physicians tell me that for some months he had suffered from constant pain in the lumbar region causing him to walk in a stooping position with his hands pressed against his back and that on exertion there was dyspnoea but not marked at any time.

The evening before his death he retired in his usual health. About midnight he was seized with an attack of vomiting and died in a few minutes. There is no record of his having vomited blood.

POSTMORTEM REPORT.

The body is that of a well developed, well nourished man, apparently 50 years of age. No scars and no marks of violence to be found.

Pupils slightly dilated and equal, with gums and lips normal in appearance. About the umbilicus and in the right groin are punctures made by the undertaker in embalming the body. Subcutaneous fat abundant, and bright yellow in color.

On opening the abdomen, old, firm adhesions are found between the omentum and anterior abdominal wall to the right of the middle line, at the level of the umbilicus. The cavity contains about two pints of brownish fluid (injection fluid). Upon the anterior surface of the stomach two.

blood clots, dark red in color, each 3x1 inch, are found; otherwise no free blood in the cavity.

Above the stomach and behind the peritoneum is a large, soft, blood-red mass, limited below by the lesser curvature of the stomach and extending upward to the diaphragm. Between the layers of the mesentery at its upper part, the same condition is found, and extending from this point outward to the left over the region of the kidney, and along the line of the descending colon.

Thorax. Extensive adhesions practically obliterate both pleural cavities. No excess of fluid in the pericardial cavity. *Heart*, normal in size; *right side*, valves normal; muscular wall pale, but firm. *Left side*, the *aortic segment* of the mitral valve normal; the opposing valve is shortened to be about $\frac{1}{2}$ of an inch from the attached to the free margin, but no thickening is present nor is there sign of recent disease in either valve.

One cusp, of the aortic valve shows a perforation near the free edge, $\frac{1}{2}$ inch in diameter, the outline of the valve, however, is preserved intact by a thin fibrous band passing across on the free edge and forming the outer boundary of the perforation. The margins of this opening are smooth, rounded and firm. There is no sign of recent disease. The muscular wall is brownish-red in color and firm. The aorta above the valves shows an advanced grade of atheroma.

Coronary arteries. *Right*, at the orifice there is a slight thickening, but the opening is not materially narrowed. The vessel in its course is soft and the calibre large, except at one point, where there is a patch of yellow thickening $\frac{1}{8}$ inch in diameter. The left shows no change.

Lungs. *Left*, the pleural cavity is obliterated by dense adhesions except at a small area posteriorly where there is a small space containing about one ounce of thin brownish fluid.

The lower lobe and lower portion of the upper lobe are airless and leathery, and on section is dry and collapsed, and dark reddish brown in color.

The apex of the upper lobe is crepitant. No areas of consolidation are present. To the inner side the lung is firmly adherent to a large solid mass lying upon and to the left of the spinal column.

Right, adhesions obliterate the pleural cavity. The lung is voluminous, everywhere crepitant, the lower lobe being slightly more resistant than the others. On section of lower lobe a large amount of bloody, frothy fluid escapes, the upper and middle lobes are drier, and collapse more readily.

Thoracic aorta. From the left extremity of the transverse portion of the aortic arch and extending downwards 7 inches, is an irregular dilatation of the vessel. It forms a large, rather firm mass containing firm bodies within it which may be moved about under the finger.

The greatest enlargement is to the left where it encroaches upon the lung, compressing it as already described, and to which it is firmly adherent. The right margin is slightly concave.

The measurements are—vertical, 7 inches; transverse $3\frac{1}{2}$ inches; antero-posterior $2\frac{1}{2}$ inches. Posteriorly the sac is firmly adherent to the spinal column at the level of the 5th and 6th dorsal vertebrae.

On removal an opening is found at this point $2 \times 1\frac{1}{4}$ inches, the long diameter being vertical. The left and anterior portions of the bodies of the 5th and 6th vertebrae and the intervening disc of cartilage are eroded, in the deepest part to $\frac{3}{4}$ inch in extent.

The course of the œsophagus is much altered. It is first drawn to the left and then backward for the extent of about $1\frac{1}{2}$ inches, and for the $2\frac{1}{2}$ inches below, is drawn to the right and forward forming a sharp angle.

Between the œsophagus and sac—at the junction of the middle and lower thirds of the sac—and extending downwards in the posterior mediastinum is an extensive extravasation of blood passing to the diaphragm and along the course of the vessels and appearing retro-peritoneally, above and behind the stomach, over the pancreas, between the folds of the mesentery as previously described.

On opening the sac along the anterior surface, the cavity is found to contain a large quantity of granular, brownish, laminated clot. Corresponding to the point of adhesion to and erosion of the vertebrae, there is an irregular oval mass of clot, very firm, brown in color, and on section dense and laminated measuring $2\frac{1}{2} \times 2\frac{1}{4} \times 2$ inches. The wall shows an advanced grade of atheroma, rough and uneven, mottled yellow and brown, with here and there a calcareous plate.

In the posterior wall two inches below the point of adhesion to the spine, and toward the right side, is a ragged V-shaped tear in a part where atheroma is marked. The arms of the V are $1\frac{1}{2}$ inches in length. This opening can be traced through the entire wall and emerges at the seat of the blood clot, previously described, between the œsophagus and the sac, the external orifice being irregularly circular with a diameter of one inch.

Abdomen. Peritoneum smooth and normal in appearance, except for the blood staining in parts as described.

Spleen. Slightly enlarged, purple in color, capsule wrinkled. On section tissue is reddish-brown in color and normal in consistence.

Kidneys. About normal in size, surface slightly irregular, capsules slightly adherent. On section, cortex pale and mottled and rather increased in thickness. Striae of pyramids not well seen. Both kidneys are alike.

Intestines. Nothing abnormal found.

Stomach. Contains 3 ounces of a greenish-yellow, sour smelling fluid. Stomach wall smooth and free from disease.

Pancreas. Blood staining over the surface—otherwise normal.

Liver. Normal in size, surface smooth, consistence normal. On section, the appearance is that of chronic passive congestion.

Genito-urinary system—negative. Throughout the posterior position of the abdominal cavity, behind the peritoneum, in the middle line and to the left, is an extensive effusion of blood, which covers the pancreas and large vessels and extends to the left over the kidney, and to a lesser extent along the line of the descending color.

A series of cases reported from the pathological department of the Manchester Royal Infirmary gives a general idea of the frequency.

character and termination of aneurisms of the thoracic aorta. In 4593 cases coming to autopsy rupture of thoracic aneurism was found in 32. The portion of the vessel involved was, the ascending portion of the arch in 12, transverse in 11, descending part of arch in 4, and the descending aorta apart from the arch in 5.

The extravasation of blood in these cases was as follows: into the pericardium 13; into left pleura 7; right pleura 1; left lung 1; œsophagus 3; externally 3; trachea 2; right bronchus 1; superior vena cava 1.

It is interesting to note that of these 32 cases 6 were medico-legal cases by reason of the sudden death.

In the majority of cases death is sudden, may be instantaneous with the rupture of the sac, but several hours may elapse, and even 9 days as recorded by Uissim (Bull de la Soc. Anat, Paris, Oct. '94).

The course of the extravasation of blood in the case here reported is apparently quite unusual. I am unable to find records of a similar condition in the literature at my disposal.

In a general way Coates speaks of abdominal aneurisms opening into the posterior mediastinum. Aneurisms of the thoracic aorta, in its descending portion, usually burst into the left pleural cavity, as the opening is more frequent on the convexity of the sac. The opening in the case was posterior and somewhat to the right and opening as it does directly into the connective tissue of the posterior mediastinum between the sac and the œsophagus, the course of extravasation is in part explained. Add to this however the almost complete obliteration of the pleural cavities by adhesions and it is further accounted for.

When the hemorrhage is into the pericardial cavity, death is supposed to result from interference with the heart's action rather from actual loss of blood. When into a large serous cavity the blood lost brings about the fatal result. In this connection strange instances are recorded. One with a loss of two and one-half quarts of blood into the left pleural cavity the patient lived 9 days after the rupture of the sac. (Uissim).

In the case here recorded the extravasation was certainly extensive, but considering the vital regions invaded, shock probably played an important part.

The erosion of the vertebrae explains the pain in the back, the only symptom complained of.

The patient as far as can be ascertained had no dysphagia which is remarkable considering the sharp kink found by the œsophagus at the level of the aneurism.

REPORT OF A CASE OF ISCHIO-SCROTAL ECZEMA MADID-
ANS RUBRUM.

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No malady save psoriasis tasks so much the ingenuity of the physician as the above mentioned affection. Its infrequent occurrence, the difficulty attending its proper recognition, the oscillatory results from treatment adopted towards its abatement, places it within the domain of unmanageable and protracted cutaneous diseases. It is an affection resisting every therapeutic measure, mocking all our efforts until we are compelled to give up the case as a hopeless one despairing of ever attaining the desired end, viz., amelioration and final eradication.

I have witnessed but six cases of this singular variety of eczema. The following case came recently under my observation.

R. R., aet., 12, American schoolboy, white, appeared in my clinic for treatment. His family history suggested a so-called "darthic or cutaneous diathesis": his mother's father and brothers having suffered from some form of skin disease (if reliance could be placed in the statements of Mrs. R.) She herself is afflicted with a psoriasis guttata of about 15 years' standing, irregularly distributed over the entire back and extensor surfaces of the elbows, thighs and legs. A sister of the patient 7 years of age—has had acute eczema of the ears and auditory canal two years ago, and has been treated for it in this clinic.

The previous history of the boy reveals an attack of some of the acute exanthemata. This occurred when he was six years of age, and has left behind as a sequela a train of symptoms a clinical picture which may be outlined as follows:

The lesions were situated upon the gluteal areas, ischio-gluteal spaces, perineum, scrotum and hypogastric region, and consisted of three distinct forms;

(a) Macular lesions, bright red in color, unaccompanied by any subjective symptoms, but possessing a great deal of marginal induration, which were located upon the perineum.

(b) Papulo-vesicular lesions, with a considerable degree of moisture, accompanied by subjective symptoms, as smarting, burning and itching. This variety was confined to the gluteal regions.

(c) Squamous lesions and fissures distributed over the scrotum and hypogastrium, consisted of extensive confluent crusts glossy in appearance, somewhat pinkish in color and of about one-sixth of an inch in thickness; these crusts exhibited cracks or fissures, exposing the delicate corium. Beneath these crusts the base was indurated, reddened and shining. Subjective symptoms were marked and caused a great deal of discomfort especially at night.

There were few faint mixed lesions on the inner surfaces of the thighs; they were, however, so insignificant, that they deserve but a passing consideration.

The general condition of the patient was good; food was properly digested and assimilated; the excretions were normal. The lesions themselves, exhibited a chronicity and were stationary in character as regards their form, for no alteration or modification whatsoever has been observed for the last five years, except an exacerbation now and then. The patient has been under treatment since the first manifestation of the malady, but without avail, for so far it has proved rebellious to the means employed.

Diagnosis. It was not easy to diagnose this case as eczema madidans, for there were several factors which were misleading. Psoriasis for one, bears a resemblance to this disease, although not marked and wanting many of its specific symptoms. Lichen cruralis possesses features in common with eczema madidans, those on the gluteal regions strongly suggesting lichen planus. Dermatitis multiforme is a disease, simulating the one under consideration so closely that a proper recognition is not always possible. Still, the symptoms pointing to eczema madidans are in preponderance. Furthermore, my experience of previous cases of a similar character, corroborated the present diagnosis.

The nature of the disease was fully disclosed to patient's mother and the prognosis given was rather unfavorable, expressing hopes, however, that at best it will disappear spontaneously, after the boy will have attained full adolescence.

Treatment. The usual remedies recommended for this dermatosis were described but proved futile. The lesions, for a while, seemed to be on a proper road towards abatement, undergoing retrogression, to re-appear, however, with renewed efflorescence and acuteness. The scales and crusts would re-accumulate as quick as their removal was effected. For a time the inflammatory and exudative features of the disease gave fair hope to decline, but soon returned with an augmented marginal induration and the formation of vesicles; the latter, after rupturing were attended by the discharge of a viscid, yellowish brown material, which in its turn was followed by dirty brown scabs. To dissolve and remove the latter and simultaneously exert a mild stimulating action upon the hardened structures beneath them, without allowing the crusts to reform and without causing undue irritation of the lesions under temporary exacerbation, were the chief indications for treatment. In search of a remedy, fulfilling these indications, glycozone suggested itself to me as the agent likely to accomplish the desired result and I decided to give it a fair trial. Pledgets of lint, saturated with glycozone were applied to the eruption over the scrotum, perineum and hypogastrium and held snugly in situ by a specia-bandage. This was removed the following morning and an ointment, composed of zinc oxid and ichthyol was substituted, which in its turn was succeeded again by the glycozone dressing mentioned above. This treatment was continued uninterruptedly for about four weeks, with very short intermissions. Meanwhile systemic treatment, consisting of an emulsion of cod liver oil with the syrup of hypophosphites and fer-

rous iodide were also administered. Under this régime, with plenty of fresh air and out-door exercise, with wholesome, nutritious and easily digestible food, the eruption began to manifest signs of considerable improvement. The crusts greatly diminished in thickness and their re-accumulation was not as marked as heretofore. The underlying indurated, reddened, and glossy base assumed a pinkish tint, and had a softer—almost velvety feel. The papules, vesicles, and fissures lost their prominence and acuteness, and no discharge whatsoever was observed at the end of five weeks. After this the zinc oxide and ichthyol ointment was discarded, but the glycozone dressings were continued thrice weekly for three more weeks. At the expiration of this time all the lesions had vanished, except a small patch in the upper gluteal region which bids fair to disappear under the same medication. The integument over the scrotum, perineum and glutei has its normal color and consistency.

Eight months have elapsed since and no return of the malady has been noticed, the boy remaining in perfect health. I attribute the eradication of this rare and obstinate cutaneous affection to the dehydrating, stimulating, detergent and protective properties of glycozone.

SELECTED ARTICLES.

PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.

By ROBERT MAGUIRE, M.D., F.R.C.P., Lond.

Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, and Physician to Out-patients, St. Mary's Hospital.

(Delivered before the Harvelan Society, of London on November 15, 1900.)

MR. PRESIDENT AND GENTLEMEN: In the previous lectures I asked you to think of the tubercle bacillus in its progress, of how we can estimate its influence upon the lung tissue and the general system, the extent of its progress and the likelihood of its further action. Now I come to the question of how we can prevent its action and progress and remedy the results of its action. Once more I ask you to think of pathology, for in a perfect knowledge of that must consist not only our prognosis, as heretofore discussed, but also our rational treatment. We must consider (a) how we can increase the resistance of the tissues (normally present) to the influence of the bacillus tuberculosis and its congeners; (b) how we can hinder the action of the bacillus by destroying its congeners, the staphylococcus pyogenes and the pneumococcus; (c) how we can hinder the action of the bacillus by interfering somewhat with its own vitality, and, finally, (d) what means can we adopt to kill the bacillus *in situ*?

(a) We can obtain increase of the resistance of the tissues by adding to their vital power, and this can be done and has been done since the disease was first known by over-feeding, fresh air and adjuvant measures. Before recent agitation we had been doing all this, and I show you here a record from my in-patient department at the Hospital for Consumption and Diseases of the Chest at Brompton of a case, treated on just simply the old lines of care, supervision, good feeding, and especially discipline of habits under a competent sister of the ward. The patient gained in weight 21 pounds in a fortnight, and he is not a very unusual example. Others show similar improvement, and that without other treatment which need be considered. The "Open-air Treatment" is, of course, good as adding to the vitality of the patient and increasing the resistance of his tissues. We have practiced this, more or less, not only in pulmonary tuberculosis but in other diseases also long before it was brought before the public so prominently as has been done recently. Debove first advanced the idea of forced feeding. Many had recommended open air in phthisis, and yet let us give honor to the men who systematized the methods. But, like all enthusiasts, they were, I think, somewhat wrong. It is right to stimulate the absorptive powers and to encourage them to deal with cod-liver oil, maltine, excessive food, and so on. It is right to make the patient breathe pure air, cold air (if needs be), and again to harden himself to exposure—if he can do so. But I would like to give you a word of warning. The profession seems to have gone mad on this matter.

Remember what Wilkie said about *his* methods. Someone asked him how he mixed his colors so as to get such wonderful effects and he replied, "Just wi' brains." Mix your prescription of open-air treatment (so-called) with a little common sense. Now, is it common sense to make a patient sit down and try to eat another mutton cutlet when he has previously vomited two? Yet I am told that this has been done in a well-known sanatorium and the patient commended for his perseverance. Surely his digestive organs required a little more consideration. And when we know a certain patient to be very liable to the effect of slight chills and also to inflammation as the result of such chills, is it necessary to put him into the open air, covered as it may be from the external atmosphere, but inhaling the cold air into his bronchi, in order to "harden" him? We sometimes cry down the methods of the bone-setters, rightly or wrongly; but surely what I have described savors of them, and I say at once that this idea is wrong. You must mix the open-air treatment and also the treatment in sanatoria "wi' brains" or else leave them alone. But let it not be supposed that I cry down the open-air treatment. I have seen what good it may do with and without the discipline of a sanatorium. I have known what good may be got by it in the best of circumstances; also in such open air as we can obtain in the Brompton Hospital, there, too, with discipline and good feeding; and I have known one patient (whom I saw with Dr. C. F. Knight) to do surprisingly well when dwelling in a tent erected in a back garden in Fulham. But we must remember that all these are only methods of bolstering up the tissues against the bacillary invasion.

Drugs of all kinds have the same effect. So, too, have other remedies which will be mentioned later, though their advocates may possibly take a different view of their action. I have used arsenic for many years as a hæmic stimulant in pulmonary tuberculosis, and for the reason that, from some cause or other, iron is not well borne by phthisical patients. I have seen good come from its use, and I refer to the matter here because of what has been recently said as to cacodylate of sodium being a cure for tuberculosis of the lungs. I have used it, and it is useful. It is a good alternative when arsenic by the mouth is not tolerated, and when one wishes to give the same or even an increased dose of the drug by the skin. I have prescribed it in blood diseases, and rarely with ill effect; but it acts only as a stimulant to the formation of red-blood corpuscles, and therefore can only have a very indirect effect upon the tubercle bacillus. It is a useful tonic remedy, and that is all.

Under this heading there may be mentioned my colleague, Dr. S. H. Habershon's treatment by the subcutaneous injection of glycogen, and that of De Backer by the administration of special preparations of yeast, though the consideration of the latter more properly belongs to a later section. Of these methods I have no personal knowledge and will say little. Dr. Habershon's idea is to increase the phagocytal power of the leucocytes by supplying them with glycogen as a stimulating food, and I hear from him that he has had some encouraging results. He has not yet completed his work, but allows me to mention it here. De Backer holds the view that the yeast cells may act as additional phagocytes and

absolutely destroy the tubercle bacillus. Allied to Dr. Habershon's method is that of subcutaneous injection of nuclein, which will be more conveniently described below.

I cannot within the limits of the lectures discuss with you all the methods of treatment which have been adopted, and most of them discarded, in modern times. I wish to devote the remainder of this lecture to a description of a method of treatment of pulmonary tuberculosis, and also of other disorders of the lungs which I have been working at for some time, which is on absolutely new lines, and which I have reason for saying is likely to be successful. I give it now to you for the first time in order that my professional brethren may form an opinion upon it. Its object is to fulfill the indications mentioned under the sections (b), (c) and (d). We would like to kill the tubercle bacillus *in situ* as mentioned in (d). But failing that, we may do good by weakening its action (c) and so enable the body powers to deal with it more advantageously, and finally, if we can produce no good action upon this very resistant tubercle bacillus, we may be able to destroy the more vulnerable assistant germs, the staphylococcus and pneumococcus. What follows I must ask you to consider as a preliminary communication to which details will hereafter be added elsewhere, and I will style the subject.

ASEPSIS OF THE LUNG.

It appeared to me that the anatomy of the lung-circulation lent itself to a special mode of treatment. We have seen how successful, and at times unsuccessful, may be the effort to increase the vitality of the lung by excessive feeding, open-air, and so on. No pronounced effect is produced on the disease by inhalations of antiseptic vapors, for these cannot be administered so as to pass the glottis in any such strength as could produce effect upon germs, even if the inhalations ever reached the lungs. They do not reach the lungs, for we have reason to believe that they never go much beyond the bifurcation of the bronchi in any appreciable strength. We know only too well, however we may appreciate our successes, that by all these methods we have a lamentable number of failures. The same, I am afraid, must be said of many other methods of treatment which have been put forward at various times, and this view I mention with every due respect to the authors of those methods and to the immense amount of work which they have given to the subject. Undoubtedly the rational cure for pulmonary, as for all tuberculosis, is the administration of an antitoxin derived from the tubercle bacillus itself, as was designed by Koch. But, as you are well aware, this has hitherto proved useless and worse than useless. So we must still say of the further attempts in the same line by modification of his methods. Some day, though probably not in our time, the end thus aimed at will be attained, and then we shall have a perfect cure. But before this result is reached we must still go on treating our patients and trying to cure them. Again, attempts have been made to obtain an antitoxin from the growth of the tubercle bacillus, not on our laboratory cultivations, as was done by Koch, but in the living bodies of such animals as the ox, the ass, and the horse. I allude here to the so-called anti-tuberculous serums, all of which have

proved to be practically useless. It has appeared to me at times that, seeing how tuberculous patients who suffer from pleural effusion seem to be much better when the effusion is allowed to be absorbed naturally and is treated by paracentesis—and this, you will remember, I alluded to in my former lecture—that the good result might be due to the re-absorption of an anti-tuberculous serum grown on human soil. It is not easy to get such serum without doing an injustice to the patient, for, as I have stated, the effusion is best left alone. Yet occasionally it happens that an effusion is so great as to by its actual presence endanger the life of the patient. Such a case occurred to me a little time ago at St. Mary's Hospital, and I determined, on removing the effusion, to ascertain whether it possessed any property which was antitoxic to the bacillus. But before using such a serum for experiment it is absolutely necessary to remove from it all active tubercle bacilli, and I could not conceive of any other method of doing this than by passing it through a Pasteur's filter under pressure. But the solution could not by any means be made to pass through the filter, and so the experiment had to be abandoned. Possibly another chance of which I can take advantage may offer itself in the future. (It may be interesting to record the later history of this case in connection with the danger from hemorrhage to which the patient is liable in the third stage, and to which I referred at the close of my last lecture. The patient, a youth, aged 18 years, was taken into the hospital because of his effusion, and I aspirated his chest, though I knew that he had phthisis in the third stage. After a few days he had recovered from his effusion and his phthisis being quiescent I allowed him to leave. He walked from the hospital down Praed street, was overtaken by copious hæmoptysis before reaching the Great Western station and was brought back to the hospital dead. I was very thankful that his hæmoptysis did not occur during my aspiration.

I have mentioned the methods of Dr. Habershon and De Backer by which it has been thought possible to inject underneath the skin substances which may reinforce the lung tissue in its fight against the bacillus—namely, glycogen and yeast respectively. Dr. Habershon's work is not yet completed, and I am afraid that De Backer's results must be said to be unsatisfactory. Others, too, have attempted to administer antiseptics by means of the skin—that is, subcutaneously—and without any success. Nor is this to be wondered at when we think that any remedy placed under the skin must be diluted with all the fluids of the body before it reaches the lungs, and then cannot fail to be powerless. For many years antiseptics, like creosote and its essence guaiacol, have been given by this method in so dilute a form, to begin with, as to be useless, even if applied directly to the bacillus. Yet they are still further diluted in the stomach, and more or less altered in their passage through the liver and other digestive organs so as not to have the slightest effect for our purpose when they reach the lungs. It is true that by reason of direct absorption through the blood-vessels of the stomach these drugs—especially creosote, guaiacol, iodoform and naphthalene, all of which I have used—reach the lung unaltered and can be detected in the expired air. It is true also that these expired vapors are of some slight use in pre-

venting the decomposition of the secreta in the lung. All of these points I have observed and willingly admit. But they have not the faintest direct effect upon the progress of pulmonary tuberculosis; in fact, they are almost useless. It has again been suggested by the followers of De Backer that the yeast cells, and again other reagents, should be injected directly into the infected parts of the lung; and once more I admit that good results have ensued. But remember, however, that such injections cannot reach very far into the tissues, and they must be very numerous, therefore painful and frequently repeated, if they are to touch even the recognized foci of disease. But what about the unrecognized foci? For surely none of us, however experienced, will venture to say that he can detect by physical examination every spot of the lung affected by an attack of tuberculosis. And what about the patches which, recognized or suspected, are beyond the reach of any injection syringe? Surely there will always remain such spots, inaccessible to all such treatment and ready to spread to neighboring and other parts of the lung. Such treatment cannot possibly be really curative. And as to the more surgical procedure of removing affected parts of the lung—and this has been done—well, the less said the better, for fear that the mere mention of it may encourage an unduly bold surgeon to practice it.

But let us come back to what I have mentioned above—that the anatomy of the lung-circulation lends itself to our treatment. This has been impressed upon me for some time, for it must be obvious that anything introduced into the veins must necessarily pass directly through the lungs by way of the right side of the heart, and without dilution of other fluids of the body than the amount of blood contained in the right ventricle at the time when the injected fluid reaches that cavity. I determined to try this method, and with much trepidation when I thought of the manifest dangers involved in the introduction of a foreign substance into the blood-stream. But I was encouraged to pursue the investigation by hearing that my colleague, Mr. Ernest Lane, had been treating syphilis by injecting 2-per cent. solution of cyanide of mercury into the veins, and by seeing the beneficial effects upon one patient of mine at St. Mary's Hospital, whom he treated for virulent syphilis. I went to the Lock Hospital to see Mr. Lane's method, and seeing what he had done I thought that if he could inject cyanide of mercury with impunity—for he had done it some 3,000 times without other mishap than the occasional missing of the vein by the needle—and seeing, too, that cyanide of mercury was not only anti-syphilitic, but also a powerful germicide, I also might safely use the same on tuberculous patients. Mr. Lane was in the habit of injecting 20 minims of a 2-per cent. solution, but I injected 30 minims of the same solution into the veins of two patients at the Brompton Hospital. But as that strength would be useless for my purpose, and wishing to use the drug in stronger solution I asked my colleague, Mr. Plimmer, to inject a solution of 5 per cent into the ear-vein of the rabbit. The rabbit died before the injection could be completed, and, as we found, from coagulation of blood in the right side of the heart. I immediately hurried, as you may readily understand, to see what had been the effect of the weaker injection upon my tubercu-

lous patients and found that both of them had become very collapsed and had suffered from painless diarrhoeal flux. It was obvious that what might be safe enough for Mr. Lane's otherwise strong men suffering from syphilis would not do for my weakly tuberculous patients. Moreover, it seemed probable, though I offer this only as a suggestion, that the mercury of the cyanide combined with the albumin of the blood, causing coagulation and liberated cyanogen and the latter, combining with water, produced a considerable amount of hydrocyanic acid, the effects of which would be to cause vaso-motor collapse and the diarrhoea which was observed.

Let me here say that before using any other remedies and those in any particular strength I was always careful before applying them to patients to test their safety upon rabbits—and later on myself. Rabbits and monkeys are the only animals, except man, which offer suitable subjects for such trials, since their superficial veins can be easily reached without incision of the skin. Obviously, if the intravenous method is to be practiced frequently, as it must be for therapeutic purposes, section of the skin by the knife is out of the question, and, indeed, I would incidentally commend to the surgeons the results of technique which I have arrived at in various ways as being improvements upon the methods hitherto adopted for intravenous injection when employed for other purposes. Again, let me remark that all these trials upon animals were performed by Mr. Plimmer, who possesses—as I do not—the requisite legal permit. Rabbits were used as being cheaper and more easily obtainable than monkeys. Further, before any advance of method was attempted, we tried to inject about 10 cubic centimeters into the ear vein of a rabbit, that is, five times the quantity I wished at that time to inject into a man, and weight for weight an enormous dose. This having been done with safety, I concluded that I was justified in applying this method to man.

To conclude this part of the subject I must here refer to an objection which may possibly be raised in reference to experiments on animals. It may be asked, why did I limit myself to merely testing the safety of the various solutions to be mentioned and did not first produce tuberculosis of lungs in the animals and attempt to cure by injection? Here are my reasons: Rabbits and monkeys were the only animals available for this particular purpose, and they are very liable to tuberculosis. But it is by no means so easy as you would otherwise suppose to artificially give them tuberculosis of the lungs with certainty. Tuberculosis of any other organ would be of no use for my purpose, for it is only the lungs which are supplied directly with blood from the external venous circulation. Now it is possible to infect a rabbit's lungs with tuberculosis by injecting an emulsion of a culture of tubercle bacillus into the ear vein. Mr. Plimmer has occasionally done this, but never with certainty. The emulsion is prone to coagulate and block the vein, and it is very difficult to determine whether a given culture is toxic or not at the moment of injection. I tried to get tuberculous monkeys from the Zoological Gardens, wishing to attempt to cure them; this would, I think, be an experiment permissible by the law. But the authorities of the Gardens, who were most courteous

to me, naturally did not wish to part with their monkeys until they were practically moribund and useless for any therapeutic effort. Rabbits can be made to suffer from tuberculosis of the lungs by subjecting them to the inhalation of dust containing tubercle bacilli, as has been shown by Cornet. But such infection cannot be done without some risk to other persons than the experimenter. For instance, Cornet himself found that when he entered the room in which the rabbits lived, in order to stir up the dust, and in spite of taking such precautions as plugging his nostrils with cotton wool, nevertheless found afterwards tubercle bacilli in the mucous secretions of his nose. Further, such a series of results obtained in this way would require an almost endless time and far more continuous observations than I could possibly give to them. But, of still more importance to a practicing physician, there seemed this objection, that the animals could not tell one how they felt, and in human beings we have to consider not only pathological anatomy, but many other points in the well-being or ill-being which cannot easily be ascertained from animals. Therefore, I contented myself with ascertaining the safety of such remedies as I wished to apply—from observation on animals and myself—trusting for further results to actual trials upon patients.

Having failed, then, with cyanide of mercury I cast about for some other germicide. Perchloride of mercury, carbolic acid, and other well-known antiseptics would obviously be useless because of their destructive action upon the blood. I tried, however, upon a rabbit the effect of the potassic iodide of mercury in the way described, for the salt is said not to cause coagulation of the blood. The result, however, was that the rabbit died in about an hour, not from intravascular coagulation like the former one, but from simple poisoning and stupor. Thus far the trials for an intravenous germicide seemed to be futile. I heard, however, from Mr. Wallace, the pharmacist, that diastase had been found to digest cellulose. Now it has been observed that the tubercle bacillus contains grains of cellulose, and it is probable that its envelope consists of some form of cellulose. From rough experiments which I made it seemed that diastase had really some power of destroying the tubercle bacillus as it exists in the sputum. This was almost a forlorn hope, but I determined to try the effect of a solution of diastase used intravenously. It was by no means easy to do, for diastase forms a very mucilaginous solution, totally unfit for such injection. Ordinary diastase I found to be quite useless, but it is possible to get a solution of taka-diastase of 5 per cent.—that is, the product known by that name and discovered by Takamine—by growth of germs upon bran. The substance has some undetermined composition, it is certainly mucilaginous and has a diastasic power. It is of great use, as probably you know, in the treatment of flatulent dyspepsia by helping to digest the starches. It forms with water a thin mucilage which, after standing for a while, deposits something which looks like a celluloid form of some crystalline substance. After a while however, a brown translucent fluid is obtained lying over the deposit; this is stable for a few hours, and undoubtedly possesses diastasic properties. But before using this as an intravenous injection, it was above all things necessary to make the solution sterile of germs. For this

purpose heat could not be employed, for it would destroy the diastasic ferment. The solution was too unstable and too mucilaginous to pass through a Pasteur's clay filter, and besides, this process would require to be repeated immediately before each injection, which would be impracticable for clinical use. I tried the addition to the solution of such a small amount of perchloride of mercury as would probably act as a germicide. This precipitated the diastase in a few hours, but adding it shortly before the injection I managed to get a solution which would keep for a short time in the fluid condition, and this I tried without ill effects upon rabbits. Later, Messrs. Squire & Sons prepared for me a fairly permanent solution of taka-diastase made with tri-cresol as the antiseptic, and afterwards with formic aldehyde in the strength of 1 to 250,000. This I tried upon patients with a view of therapeutics which I have mentioned. I injected 30 minims—that is, 2 cubic centimeters—at intervals of four days. But the immediate result of the infection (a result which appeared in about half an hour afterwards) was rigor, pyrexia, and sweating; in fact an exact imitation of an ague attack. The pyrexia reached to the height of about 102° or 103° F., and afterwards the patients felt much better; certainly they took food more freely, and there could be no doubt of some improvement in the condition both generally and as judged by the physical signs of the chest. Yet there was not so great an improvement as to encourage me to pursue the treatment. Mr. Horace Brown, F.R.S., so well known for his researches on diastasic zymes, very kindly gave me his advice on the question under discussion and suggested that I should try the effect of cytase, such as he had obtained from freshly cut oats. He has shown, and has described in his published papers, that this substance is very powerful in digesting the cellulose envelope of cereals. I show you here a solution of cytase which has been prepared for me by Mr. Peter Squire in a form which might be used for intravenous injection, and the solution I have found to have a very definite solvent action even upon cotton wool. Again, you see under the microscope two sections of barley. One has been treated with a solution of formic aldehyde alone—that is, with an antiseptic; the other with the same reagent, but also with cytase, and the latter specimen shows a marked solution of the cellulose envelope the grain, while the former appears to be intact. We would like to get the same solution of the tubercle bacillus in the lung, but, unfortunately, the reaction is very slow and is likely to be greatly interfered with by dilution in the process of intravenous injection. I have obtained the solution of cytase which I show you only within the last few days. I will certainly try its effects, for possibly one may be able to hasten its action.

In the last lecture I mentioned the surprising effects which I had obtained by administering nuclein by the mouth in the treatment of such tuberculous glands as could not be removed by operation. I tried nuclein given thus, upon patients suffering from tuberculosis of the lungs, and without the slightest effect. The idea, of course, is that the nuclein will so strengthen the leucocytes as better to enable them to fight the bacillus. But it seemed to me desirable to ascertain what effect the same substance might have when used intravenously. For this purpose I employed the

Liquor Nucleinicus of Messrs. Squire & Sons, a sterilized solution of the nucleinate of soda (which I show you), and I injected two cubic centimeters on each occasion. The results were exactly the same as in the case of the diastase solution, a distinct febrile reaction and afterwards some improvement in the condition of the patient, but the results were not encouraging, nor do I think it desirable to use a remedy on a tuberculous patient which, like diastase, nuclein, or the tuberculin of Koch, increases, if only for a time, the already existent pyrexia. Yet I think this matter may very well be a subject for future investigation.

The pyrexial reaction after the use of such prospective remedies is very curious and interesting. I may say here, with Dr. Habershon's permission, that in his experiments on the subcutaneous injection of glycogen, he found that the same febrile reaction occurred when the glycogen employed was not entirely freed from nitrogenous matter and did not appear when this matter had been previously removed. Again, during the last few months I have treated four cases of aneurism of the aorta by the intravascular injections of sterilized solutions of gelatin, following, with some little modifications, Lanceraux's method. After each injection I observed a distinct febrile reaction, the temperature on one occasion rising to 104° F., but always (in these cases) without any inconvenience to the patient. Putting all the results together, one is led to the idea that the fever is dependent upon the introduction into the system, by any method whatever, of some albumin.

But in the course of the above-mentioned experiments the question of antiseptics became, as I have hinted, very important, and I thought that one ought to ascertain whether the results had been produced by the diastase or the nuclein, or by the antiseptic used to sterilize the solution. Mr. Squire told me that he found 1 in 250,000 of formic aldehyde a sufficient antiseptic, and this, and afterwards 1 in 100,000, I tried on rabbits, and afterwards on patients. I need not give you further details, but let it suffice to say that I at last reached a solution of 1 in 2000 of the pure formic aldehyde gas, that is, 120 times stronger than I had at first used. In my earlier trials I found that I could inject two cubic centimeters of solution in the space of five heart beats, but by later improvements in the technique I could admit into the veins at least one cubic centimeter for each heart beat, and frequently double or treble this proportion if the patient could be kept quiet. The reason for measuring the rapidity of injection by heart beats and not by seconds you will see in a few moments. We can calculate with fair accuracy what is the strength of such a germicide solution passing through the lungs when injected into the veins. Using for the purpose of injection the syringe ordinarily employed with anti-tetanic serum, I at first found, as I have mentioned, that I could inject two cubic centimeters in the average course of five heart beats, meaning that two-fifths (or 0.4) of a cubic centimeter were injected with each heart beat, and therefore mingled with each one filling of the right ventricle. The right ventricle of a man who weighs about 10st. 7 lb. is believed to hold approximately 100 cubic centimeters, the solution used is of a strength of 1 in 2000, therefore the strength of the solution in the right ventricle will be $\frac{2}{5} \times \frac{1}{100} \times \frac{1}{2000} = 1$ in 500,000. Not a great strength

it is true, but probably of some efficacy seeing that a certain amount of the reagent will remain in the lung to be added to by future heart beats. Moreover, as I will shortly show you, it is possible by other methods to inject quite easily one cubic centimeter for each beat, and even twice or thrice that amount. But with the one cubic centimeter for each heart beat we reach a strength in the right ventricle of 1 in 200,000, which is of formic aldehyde a strength which has been proved to be a very efficient germicide. To anticipate, I may say that I have been able to inject 50 cubic centimeters in the space of 25 seconds, when the pulse was beating at only 60 per minute, and even this rate may at times be exceeded. But this speed means two cubic centimeters for each heart beat of a 1 in 2000 solution of formic aldehyde, which is added to each filling of the right ventricle, making a solution of 1 in 100,000, which will sluice out the lung for the space of about 30 heart beats. This certainly must be a powerful germicide, even for the tubercle bacillus, let alone its more easily attackable congeners, the staphylococcus pyogenes and the pneumococcus. Therefore, I determined to use such a solution in the treatment of pulmonary tuberculosis. At first I did not venture to inject more than two cubic centimeters at one time, but becoming bolder I increased the quantity, and at the same time the strength of the solution until, by means of the syringe used for diphtheretic antitoxin, I could inject 10 cubic centimeters of a 1 in 2000 solution of pure formic aldehyde gas at one time. Wishing to go still further I thought it desirable to make the solution of the gas, not with plain water, but with normal saline solution, so as to prevent any destruction of the red corpuscles, and it is this solution which I show you now, as prepared by Messrs. Squire & Sons, by their own methods of sterilization, and called for convenience "*Hæmasepsin*."

It will be convenient now to describe the method of injection. It seems an easy thing to pierce a vein with a needle and to inject a solution into its interior. In practice it is anything but easy to do so. The vein rolls under the needle and presents great resistance to the piercing. Again, the needle, in spite of all care, will often transfix the vein or at least puncture the opposite wall. In either case not only does the injection fail, but the solution is deposited in the circumvenous tissue and causes great pain. It is only after considerable experience and with a certain amount of technical skill that the injection can be properly given, and in view of the manifest danger no one should lightly undertake it. I find it best to ligature the arm above the elbow so as to make the veins prominent, and then plunge the needle boldly into one of the large veins on the front of the elbow. The ligature of the arm should now be loosened and the injection proceeded with, careful watching for any swelling which would indicate escape of the fluid into the circumvenous tissue. I have tried to use a needle on the principle of the Southey's trocar, hoping that on the withdrawal of the point one might easily introduce the canula farther into the vein without risk of repiercing the wall. This, however, I have not found feasible. Again, I have tried what one might call valvular puncture—viz: perforating the skin first and afterwards piercing the vein at a higher point. This, however, is difficult to do because of the rolling of the vein—and it must be remembered that any attempt

to steady the vein leads to its collapse—and, moreover, there is considerable risk of causing a troublesome hæmatoma, in the subcutaneous tissue. For these reasons it is best, I find, to plunge boldly into the vein through the skin, first anointing the skin with carbolic vaseline, 1 in 12. Naturally the needle and skin must be rendered perfectly aseptic and if the patient be very nervous the skin may be sprayed with a solution of cocain to anesthetize it, though this is really unnecessary.

So far, however, the limit of an ordinary syringe—10 cubic centimeters was reached, and to give larger amounts with one puncture required special apparatus. I therefore devised and had made for me by Messrs. Squire & Co. a syringe. It is really a miniature stomach pump, the tube of which holds a few cubic centimeters and can be replenished from the bottle without removing the needle from the vein. But this instrument must be used with the greatest care, since the mere movement of turning the stopcock and reversing the piston is frequently just enough to cause the needle to transfix the vein and ruin the injection. Because of this I have employed mere hydrostatic pressure, using an ordinary 100 cubic centimeter burette of narrow calibre, so as to get as high a head of fluid as possible, and I connected this by an india rubber tube with a rather wide-bore needle. The burette is furnished with a stopcock, and the needle being rendered aseptic, a certain amount of fluid is run through it so as to fill the whole apparatus with the reagent. I may say here, however, that no fear need be entertained from the entrance of a small amount of air into the veins. This is an old-fashioned surgical fallacy. For ordinary use the burette is the more convenient instrument, though somewhat cumbersome to carry, but occasionally it happens that the venous pressure is so great that the syringe is useful. It was by means of the simple burette and of a large bore needle that I was able to inject one cubic centimeter of the hæmasepsin during each heart beat. Later, however, I have used in addition to the burette the hand-pump you see here, which enables one to make a much more rapid injection. After the injection the needle is withdrawn. A little bleeding may occur, and it may sometimes be necessary to cover the puncture with a few threads of alembroth wool and collodion, but commonly the pressure of the finger upon the puncture for a moment or two is enough to stop all oozing. The part is triflingly tender on the next day, but no further ill-effect is usually seen. The slow injection of the solution at ordinary room temperature is accompanied by a curious cramp-like pain in the fingers and up the arm as far as the axilla. This I have observed on myself. The pain can be prevented by warming the solution to blood-heat, but I have grave doubts whether this is desirable. The heating may possibly be done with due precautions without destroying the effect of the remedy, but it must be remembered that formic aldehyde is a very volatile substance, and the heating of its solution may cause the gas to be driven away. The pain is not great and can really be very easily borne up to the injection of 50 cubic centimeters, so I think it better to give the solution cold; moreover, rapidity of injection almost minimizes the pain.

In this way by one or other instrument I succeeded in giving daily injections of 50 cubic centimeters without any bad or unduly unpleasant

effect. This means, as stated above, that for at least 50 heart beats the lung was sluiced out with a solution of formic aldehyde of a strength of 1 is 200,000 or more. The stronger the solution and the more prolonged its contact with the lung tissue, the more powerful would be its action as a noxious agent on the germs contained in the lung. It was, therefore, desirable to ascertain the danger limit of such injection. This could not be found by experiments upon animals—it was scarcely fair to submit a patient to the risk—so I had the trial made upon myself. One morning at about 11 o'clock I asked my house physician, Dr. van Praagh, to inject 100 cubic centimeters of a 1 in 2,000 solution of formic aldehyde into a vein of my arm. I wished to ascertain whether the aldehyde passed out of the kidneys as such, and in about an hour it was detected in the urine by the rosanilin test. Incidentally, however, it appeared that albumen was present, but no blood-coloring matter, and that the urine was very acid. Now, at that time of the day the urine of an ordinary man is usually alkaline, and my own is generally so alkaline—as I have frequently observed—as to deposit phosphates at the time of micturition. The ascertained acidity of the urine was, therefore, abnormal, and was probably due to the presence of formic acid, though I had no means at hand for testing this. In about another hour all these conditions had disappeared. A few days later Dr. van Praagh injected into my arm, and at a somewhat quick rate, 263 cubic centimeters of a 1 in 2,000 solution. We only stopped the injection because our stock of solution was exhausted, though I certainly experienced a good deal of cramp-like pain in the arm and a curious nervous uneasiness in the thorax, and especially in the cardiac area. Immediately I passed urine which was copiously loaded with blood. Many red corpuscles were found in the urine, but not so many as would be expected from the amount of blood-coloring matter present. An hour later the urine was still more bloody. Then for about four hours it happened to be inconvenient for me to micturate, but on doing so it was obvious that the blood had formed small clots in the bladder, which were expelled only with some straining, and for some little time there was considerable irritation of the bladder. Still later the urine was of a brownish tint, containing no albumen or ordinary blood-coloring matter, but I had no means at hand to collect it or to further ascertain its composition. On the next day all urinary changes had disappeared, but I was very dusky and yellowish as regards the subconjunctival tissue. During this period, too, I had a certain amount of bronchial catarrh and was conscious too of being unduly irritable in temper. It was here a question as to whether the bad results were due to the formic aldehyde or to the volume of fluid injected, so four days later I determined to have injected a solution of 1 in 1,000. This is really (as I found afterwards) a caustic solution, and I could not bear the injection of more than 63 cubic centimeters. The injection was stopped because of the extreme cramp-like pain and faintness. Very shortly afterwards I suffered from severe bronchial catarrh, accompanied by much wheezing in the chest and the expectoration of considerable quantities of frothy white mucus. Soon (but subsequently) there occurred catarrh of nearly all the mucous membranes, except, as far as

one could ascertain, that of the stomach. There was much running from the nose and conjunctivæ, there was great irritability of the bladder, but no urinary change, and a mild but troublesome dysentery, the bowel pouring forth much clear mucus. On the next morning, too, there was a thrombus in the injected vein of about three inches in length, surrounded by an inflammatory zone and very painful. The thrombus has now become smaller and less painful, but it has not entirely disappeared. This was an unpleasant experience, but it served its purpose and showed that the maximum strength of solution to be employed in its then form must not exceed 1 in 2,000, and the maximum injection must not be more than 50 cubic centimeters for an adult.

The experiments showed more. They are imperfect scientifically, for I was not prepared for the result, and had not means at hand for its proper investigation. They are sufficient, however, for therapeutic purposes, and naturally I do not care to repeat them on my own person. They show that formic aldehyde is an irritant to the mucous membrane of the lungs, and that even after passing through the lungs its solution may be of sufficient strength to irritate the mucous membrane connected by circulation with the left side of the heart. I have already mentioned what strength of solution we may expect in the right side of the heart from the injection into the veins of a 1 in 2000 solution of formic aldehyde. Naturally this will be enormously diluted by the time it reaches the general circulation, and it is difficult to estimate this dilution. But let it be remembered that a dilution insufficient to kill the tubercle bacillus may nevertheless weaken its action, and may still kill other minor germs, such as the staphylococcus pyogenes or the pneumococcus, the presence of which favors the growth of the tubercle bacillus. Experiments are in progress to ascertain the effect of various weak solutions of formic aldehyde on the growth and action of these germs; the results of such experiments I will publish later. Again, let me call attention to the fact that the aldehyde in strong solution caused bronchial catarrh. Below I shall have to mention that cough is not only unrelieved but often increased during the treatment of patients by this method. Possibly such mild irritation may be beneficial as a counter-irritant to the lung tissue, stimulating it to more healthy action, but its existence warns one that the treatment must be pursued with caution and frequent inspection. In fact, I have sometimes found, as I will describe, that improvement only appeared when the treatment had been suspended for a few days.

Again, to prevent disappointment, one ought to remember that the pulmonary artery—the only vessel directly affected by the intravenous injection—is not the only artery which goes to the lungs. As I have elsewhere explained it is the “functional” vessel of the lungs, while the bronchial arteries coming from the aorta are the “nutrient” vessels of the lungs and are not primarily touched by the injection. Nevertheless, I have not found great need for such warning in practice, so great is the diffusion through the pulmonary capillaries.

In estimating the result of such a method of treatment upon the human subject it is of all importance to take care not to deceive oneself. Of, say, 100 cases of early tuberculosis of the lungs probably 90 will show

good results with no other treatment than improved hygiene and feeding. If any new treatment were applied to such cases one could easily be persuaded that it was successful. Naturally one would always wish to carry on a treatment in an early stage, but judgment of the effect of such treatment would be futile. For this reason I have only tested the treatment on severe and even desperate cases, thinking it better to meet with some failures if only one could get good results in a few cases where other remedies might have probably been useless. I append a few of such results, to be followed by a further series shortly. The test points are the steady and reduction of hectic temperature, the quieting of the circulation, the diminution of the amount of sputum, the disappearance therefrom of pus and of the tubercle bacillus and other germs, and the abolition of such physical signs as indicate active tuberculous mischief.

I will tell you, here, the method which I have pursued in testing for such results. In hospital and elsewhere I have treated thus some fifty persons. Some of them were at the Brompton Hospital, with surroundings, feeding and discipline specially designed for their complaint. Others were treated at St. Mary's Hospital with the ordinary course of diet, etc., pursued in a general hospital. And not all of these had the intensive treatment which of late I have adopted. Dr. R. G. Reid, of Lambeth, has in consultation with me treated some twenty patients who might be considered equivalent to those at the Brompton Hospital, but with their own home surroundings. Dr. A. Findlater, of Edgeware, who is in charge of the Hendon Workhouse Infirmary, has similarly treated seven cases with practical home surroundings, but also in a country atmosphere, or as near that as one could obtain within easy reach of supervision from London. I must not here give you details of these cases but merely the summary of the results. Almost every case has shown some improvement, and in some this has been very marked. Most usually in my own cases the physical signs have diminished in amount as the earliest indication of improvement; appetite and general condition have been better after injection, and in nearly every case the patient has gained weight. The sputum became more frothy and less purulent, and in a few cases tubercle bacilli and other germs have already disappeared. I show you here one such patient. He came under my charge at St. Mary's Hospital in the autumn, suffering from a very marked outbreak of the multiple pleuritic form of tuberculosis. His temperature, as you see, showed a rapid decrease, his physical signs diminished, tubercle bacilli disappeared from his sputum, and now he seems to be perfectly well. If you will examine his chest you will find nothing but some thickening of pleura in patches on the left side. Dr. Reid's cases have shown similar results in spite of the somewhat hard circumstances under which the patients were placed. Dr. Findlater, who is here to-night, will tell you himself of his results, one in particular being extraordinary.

The patients should be carefully watched during the treatment, for you have heard how I myself suffered from the effects of an overdose of the injection. If the injection be pursued too long the for-

mic aldehyde will unduly irritate the lung tissue and increase the symptoms. It is only practice and experience which can tell one when to suspend the treatment, but, as a general rule, I should think it desirable to give up the injections for a few days when the temperature has fallen, when the sputum has become mucous and frothy, when the cough is unduly troublesome. With regard to the latter symptom I do not see the same objection to treating it by opium as obtains in ordinary coughs. This cough is due to irritation of the pulmonary mucous membrane, and the same irritation causes the excessive secretion of mucus. An opiate will relieve both, and is not, I think, counter-indicated.

Though it is somewhat outside our present subject, I may here mention the results of the treatment on bronchiectasis. As you know, scarcely anything can have a fouler smell than the sputum from this complaint, and at times so bad is this symptom as to incapacitate the patient from intercourse with his fellows. A patient came under my care at Brompton who had been supposed to be suffering from this, though I found that he really had a tuberculous cavity at the base of the lung with pleural adhesions, which kept the walls of the cavity constantly stretched. This was a similitude of bronchiectasis. His sputum was very offensive, so much so as to render it undesirable to keep him in the same ward with other patients. It separated on standing into the three usual layers. At this time I had not given a greater injection than two cubic centimeters, and that by the syringe. After even the first injection distinct improvement was observed in the condition of the sputum. It became almost devoid of odor, less purulent and much less copious. He left the hospital much improved. I have treated a few typical cases of bronchiectasis similarly, and with like, though not such immediate results. My last case requires special mention. My colleague, Dr. Percy Kidd, asked me to apply the method to one of his patients at the Brompton Hospital. The patient was a country policeman whose bronchiectasis and accompanying condition were so bad that he had been warned to leave the force if he could not get better. He was really unfit to associate with his fellow men. He had been treated by inoculation in our "guaiacol room," but when I saw him was in a wretched condition, although he had showed some slight improvement. At this time he was coughing up much more than a pint per day of very foul sputum. I began with the two cubic centimeters of injection on each day and afterwards administered 50 cubic centimeters of injection by means of the burette. He rapidly improved, and when I last saw him he was expectorating only three ounces of matter, which had only a faint odor. He then had to leave the hospital in order to report himself so as not to lose his pension; but I have little doubt that he could have been permanently cured.

[Since delivering the lectures I have tried, by modifying the vehicle, to use a greater strength of the formic aldehyde solution. At present I will not give details, but I think the result can be accomplished. I purpose bringing the whole matter before one of our societies at an early date in order that it may be adequately discussed.]

APPENDICITIS.*

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In the preparation of this paper it is my intention to give a brief practical exposition of one of the living issues of the day—that veritable death-trap, the appendix vermiformis. The controversy between surgeons who advocate operations on all cases of appendicitis and those who believe that operation should only be resorted to in a wisely (?) selected few has never been warmer than at the present time. To the rising young surgeon and the busy medical practitioner the controversy must be perplexing, and is, no doubt, responsible for many fatal issues; but when we look back it is our common experience that contradiction has been the fate of all original observations. Most medical men concede that appendicitis is a surgical disease, and no higher authority can be quoted in support of this statement than Osler, who writes: "So impressed am I by the fact that we physicians lose lives by temporizing with certain cases of appendicitis, that I prefer, in hospital work, to have the suspected cases admitted directly to the surgical side. The general practitioner does well to remember, whether his leaning be toward the conservative or the radical methods of treatment, that the surgeon is often called too late, and never too early. There is no medicinal treatment for appendicitis."

Medical men wisely turn to the surgeons only to find them widely differing in their opinions of the appropriate line of treatment to be followed in each individual case. A number of eminent surgeons at the present time are unconsciously leading an army of rising young physicians and surgeons into the field of the appendix, and they are then advised to hesitate and await developments. The greater the man, the wider his influence for good or bad, and he ought to realize that he is not only misleading many worthy men, but a multitude of incompetents, who have always advised against operation, because they are not operators, and are finding an immense amount of satisfaction in it because their favorite professor is advocating what they consider good surgery. I pursued a conservative course for several years. I thought a few men like Murphy, Deaver, Morris, Price and Bernays were entirely too hasty, and that the time was not far distant when they would be glad to modify a few of their radical utterances. But close application, careful research, and sober judgment based on experience, has caused me to adopt the radical doctrine, and I have practiced it for the past three years with the utmost satisfaction. I shall briefly give my reasons for abandoning the conservative plan in surgery of the appendix.

The anatomical construction of the appendix predisposes to a series of pathological alterations second to none in the domain of surgery.

*REPRINTED FROM THE INTERNATIONAL JOURNAL OF SURGERY, JAN. 1901.

Springing from the inner and back part of the lower end of the cecum is a thick, hollow tube, blind and blunt at its extremity, its cavity communicating with that of the cecum by a small orifice imperfectly guarded by a valvular fold of mucous membrane. Its wall is largely made up of lymphoid tissue, resembling the tonsils in structure, protected from the cavity of the cecum, which always contains septic material, by a delicate layer of epithelium, which, if displaced by injury or disease, leaves an open door for bacterial infection.

Without even a displacement of the protecting epithelium, Keen and DaCosta refer to this lymphoid tissue, this tissue of lessened resistance, as peculiarly liable to influenzal infection, and Goluboff claims its epidemic character is analogous to epidemics of tonsillitis. The only structure separating this tissue from the thin peritoneal investment, a part of the general peritoneal cavity, is the imperfectly developed muscular layer, which is an exciting and contributory factor, inasmuch as its contraction causes a constriction of the appendicular artery and its branches, permitting bacterial invasion and favoring ulceration of the mucosa and interstitial supperation in the wall. The branches of the superior mesenteric plexus of the sympathetic are pressed upon; and this explains why it is that pain may be referred to any or all parts of the abdomen. Its contraction permits no period of rest for reparative changes. This organ of low vitality, in the process of evolutionary extinction, is supplied by a single artery, a remote and terminal branch of the superior mesenteric, holding no collateral communication with any other vessel, and often passing to the tip of the appendix before giving off its supply branches. The inconstancy in the length of the meso-appendix is in keeping with its other imperfections. If too short, it will throw the appendix into kinks and curves, interfering with drainage and with escape of any material lodged within.

Let us now depart from the purely anatomical. We admit that under ordinary circumstances the appendix is able to take care of itself, and may be successful by means of its musculature and secretions in driving away foreign bodies, such as grape-seeds, cherry stones, etc. It must be remembered, however, that it has imprisoned within its walls the bacillus coli communis, innocent as long as the prison wall is unbroken, but if by abrasion, contusion or inherent weakness its integrity is impaired, this organism will pass into and often through it, and is then liable to become instantly virulent, producing a suppurative inflammation or even necrosis. Indeed, it is the most common cause of acute suppurative peritonitis, and is mainly responsible for the formation of abscesses. This innocent and trusted inhabitant of the colony fortunately does not at all times exert its virulency; but can our conservative friend sit at the bedside and determine whether the bacilli contained in the appendix are of the virulent type or not? Can he tell when the colon bacillus is alone, and when it is associated with other pyogenic organisms, such as the streptococcus pyogenes, which shows a strong predilection for lymphatic tissue, lymph-vessels and lymph-spaces, through which it spreads with alarming rapidity? Again, we have the staphylococci, and their potent chemical products find congenial association, and like the others are not always, but usually, bad.

With this array of anatomical and bacteriological conditions, can any one dispute the propriety of a radical procedure at the earliest possible moment after the recognition of the disease? Nearly a century and a half ago, Mestivier accurately described appendicitis, while we failed to recognize it until a comparatively recent period. The diagnosis is no longer doubtful or difficult, and yet the majority of medical men are still undecided which course to pursue. Comparatively few hold positive convictions, and their position is a most anxious one whenever they are called upon to outline the course of treatment, because they cannot fortell with even approximate certainty the outcome of the case.

The surgeon who operates during the first twenty-four hours, will tell you that 98 to 99 per cent. will recover—a mortality of one or two per cent. Can those who advocate delay even approximate as favorable a record? Recovery without operation means recurrence in a large percentage of cases, and there are many surgeons to-day waiting in anxious expectancy and uncertainty for the opportunity to operate between attacks. The grape-seed and the cherry-stone of early writers have been displaced by recent bacteriological research, yet the writer found a shoe-button in the appendix of a shoe-dealer, and an overdone bean in the appendix of a bean-baker. No doubt foreign bodies, including the commonest, the fecal concretion, sometimes cause a displacement of epithelium thus forming an infection atrium. Appendicitis, however—the acute, infective variety, of which this paper treats—is due to the invasion of the histologic layers of the appendix by pathogenic bacteria. Many surgeons educated in pre-antiseptic days find great difficulty in applying recent methods. This is especially true concerning the greatest discovery of the century—“antiseptis.”

Appendicitis has only recently been regarded as a surgical disease by medical men, and does it seem strange to you that our older friends, who were brought up in pre-operative days, still cling to a natural conservation? Pain is the leading symptom, and is relief sought for from the surgeon? No. Because the laity is educated to believe that the surgeon is the man above all others who inflicts more pain, and so it is the family physician who first treats these cases and to whom they look for relief and guidance. Are you prepared to risk your reputation as a good doctor and safe adviser by depending on rest in bed, abstinence from food, internal antiseptics, external applications, and anodynes, to prevent the entrance of pathogenic organisms into and through the walls of the appendix? This, in brief, is the medical treatment.

You may say that the bacilli contained within the intestinal canal are not at all times virulent. I admit this to be true. We are only doctors and have no desire to be classed as prophets. It is absolutely certain that in ninety-nine per cent. of the cases this bacterial infection is limited to the wall of the appendix for the first twenty-four hours, and that ninety-eight per cent. will recover if operated on at this time. I have never lost a patient operated on during this period, and from my score of friends and acquaintances among operators I have never heard of a death.

Can we diagnose appendicitis positively during the first twenty-four hours? Yes, better than at any other time, because it is a disease having

no insidious prodromes. It is sudden in its onset, with pain as the initial symptom. Tenderness in the right lower abdomen, rigid muscles, characteristic position of body in bed, and altered facial expression, are sufficient to establish a diagnosis, and operation should follow as soon as suitable preparations can be made. After twenty-four hours that dreadful element of uncertainty creeps in. We no longer feel confident that we have the micro organisms enclosed in definite walls; we cannot tell when and where perforation is about to take place. In other words, nothing short of an incision can give any idea as to the extent of the pathologic alterations. After twenty-four hours the diagnosis is rendered more difficult, the prognosis impossible, and the danger of operation greatly increased. If at the expiration of twenty-four hours the pain is lessened, the tenderness has almost subsided, the abdominal muscles are no longer so rigid, the flexed thigh can be laid flat on the bed, with a temperature of 99° and a pulse of 85° , shall we operate? Yes, because the pathologic changes in the appendix cannot be determined without inspection.

The following cases will illustrate the necessity for operation under these conditions:

Case 1. H. E. W., aged 27, switchman. About 3 a.m., March 3, 1898, he was seized with intense pain in the abdomen and vomiting. I reached him about 8 a.m., and found him suffering from intense pain with vomiting. The right lower abdomen was tense and tender; the temperature 101.2° ; the pulse 110. He gave a history of a mild attack two months before. Diagnosis, appendicitis. I advised immediate operation, which was refused. He agreed to go to the West Side Hospital, and was admitted at 9.15 a.m. Another patient in the same ward, on whom I had operated for appendicitis, and who was convalescing, induced him to be operated. The following morning I was telephoned his decision, and at once ordered him prepared for operation. His condition at 9 a.m.—one hour before operation—was as follows: Temperature 98.6° ; pulse 72; bowels had moved; no distention; no pain; slight tenderness; good expression. He felt well enough to go home, but wanted it out, as this was the second attack. Operation, 10 a.m. I found the appendix enlarged and entirely gangrenous free in the abdominal cavity; no adhesions. It was removed at the cecum, the opening being closed by Lembert sutures. Recovery was uninterrupted, and the patient was at work in one month after operation.

Case 2. The brother of the patient in Case 1, C. W., aged 33, also a switchman, sent for me May 17, 1899, with the following history: In the early morning of May 14, he was seized with an intense radiating pain all over the abdomen, most intense in the lower right side, accompanied by a chill and vomiting. On comparing it with his brother's attack he decided it must be appendicitis. He objected to send for me on the ground that I would advise immediate operation. Therefore he summoned a physician who treated him along medical lines. At the completion of the third day he was suddenly seized with diffuse pain and other evidences of shock. They sent for me, giving the details in the case, and expressed their determination to have an operation. I immediately sent him to the West Side Hospital, where I found that shock was so intense that opera-

tion was entirely out of the question. The abscess had evidently ruptured into the free peritoneal cavity; sepsis was marked. The abdomen was tympanitic, with but little pain, no fever, and a pulse of 129 to 140. The distention became so great and distressing that I opened the abdomen the third day after admission, to establish a relief opening for the escape of gas, and found the peritoneal cavity filled with foul pus. He died on the tenth day of the disease.

Analysis of these two cases would be superfluous. It suffices to say that one had the advantage of scientific progress and the other did not.

My experience in operating on appendicitis cases early in the disease has convinced me that all pain, vomiting, muscular rigidity and tenderness do not call for operation. I refer now to a mechanical difficulty—appendicular colic. It is not a disease because it has no pathology. Muscular contraction, in its efforts to expel a foreign body or fecal concretion, gives rise to intense pain similar to the passage of gall-stones or renal calculi. These cases cannot always be differentiated. It is my practice, however, to place these suspected cases on medical treatment for twelve hours. If nausea and pain disappear, the tenderness is not increased, the temperature is normal or not over 100° , the pulse is normal or not over 90, and the patient's expression is good, recovery without operation is probable. This rule is my guide in the management of cases of catarrhal appendicitis, which usually recover under medical treatment. I concede to the medical attendant the management of these and all other cases of appendicitis for the first twelve hours, but if improvement is not marked during the second twelve hours, he should loosen his grasp and summon surgical aid. The overworked and overburdened general practitioner cannot afford to be harassed by unknown and unseen pathologic conditions.

The early application of modern surgical principles offers security to your patient, relieves your own mind by division of responsibility, and will crown your ever anxious moments with merited success.

MISCELLANEOUS.

SEBORRHEA.—Dr. J. F. Payne, in *Allbutt's System of Medicine*, says:—

There are many popular remedies for dandruff. Washing, alkalies, lime-water, borax, etc., have some efficacy in removing the scurfy condition for a time. And admitting that this condition is almost certainly due to the action of microbes, we treat it upon this supposition. Hence, first we shall disinfect the skin of the head as thoroughly as possible. For this purpose an antiseptic soap may be used; I prefer one containing biniodid of mercury. After washing with this a few times the scalp is to be brushed over with perchloride of mercury solution (1 to 1,000), either aqueous or alcoholic. But this treatment is not sufficient, and irritation is often produced by the antiseptic; we then have recourse to sulphur combined with carbolic acid or tar, as follows:

- R. Sulph. præcip., gr. xv.
Acidi carbolici, *m* xv.
Olei amygd. amar., *m* iij.
Paraffin moll., $\bar{3}$ j.

M. Ft. unguent.

Coal-tar solution may be substituted for carbolic acid, and the ointment may be scented with an essential oil. Resorcin, either in a lotion—2 to 5 per cent.—or combined with sulphur in a ointment—the same proportions as given for carbolic acid—is also a very efficacious means. The ointment should be rubbed thoroughly into the roots of the hair once a day for a fortnight, and afterward used occasionally. Since patients will not tolerate greasy applications for very long, a lotion or hair wash must then be substituted. The following prescriptions are useful:—

- R. Liq. carbon deterg., *m* iv. ad x.
Glycerin, $\bar{3}$ ss.
Aq. rosæ, ad $\bar{3}$ j.
- M. Ft. lotio.
- R. Glycerit. acidi tannici, $\bar{3}$ i-ij.
Acidi carbolici, *m* v.
Aq. rosæ, ad $\bar{3}$ j.
- M. Ft. lotio.
- R. Acet. cantharadis, $\bar{3}$ ss.
Hydrarg. bichoridi, gr. j.
Spir. camphoræ, *m* iij.
Aq. dest., $\bar{3}$ j.
- M. Ft. lotio.

The latter is used only when there is an entire absence of inflammation, as a stimulant to hair growth.

Too frequent washing with insufficient drying greatly favors the production of dandruff, and must be avoided. Seborrhea of the body, if

not complicated with eczema, is easily gotten rid of by thorough washing followed by a sulphur ointment or lotion, or one of the other remedies recommended above for the scalp. In all affections of the head, brushes, combs, and other articles should be kept thoroughly disinfected with borax or carbolic acid.

Seborrhea Oleosa.—The first step here is thoroughly to remove the sebaceous crusts, for which purpose inunction with some oily substance—such as pure olive oil, carbolized oil, a mixture of equal parts olive oil and fresh lard, or others is necessary. These should be left on for twelve hours, and the head then washed with soap, or, if the skin is inflamed, with yolk of egg. The subsequent treatment is the same as for the other variety. Sulphur in some form is the most efficient remedy.

Internal Treatment of Seborrhea.—Generally speaking, no internal treatment is necessary, and from my own experience I believe that internal conditions have little to do with the production of seborrhea. But two points have to be considered. 1. Gastric dyspepsia though far from producing seborrhea of the scalp, may aggravate the condition when present, chiefly by producing irritation of the skin and consequent scratching. The same is true of constipation. It may then not be superfluous to correct morbid conditions of the stomach and bowels as far as possible. 2. The general nutrition of the skin may be bad, and consequently the seborrheic process gets firmer hold. Hence it may be advantageous to give a course of arsenic which has acquired a special reputation in the treatment of certain forms of seborrhea corporis.—*Jour. American Medical Association*.

CORNS.—

R. Ext. cannabis indicæ, gr. 15.
Acidi salicylici, ʒ 2½.
Ol. terebinthinæ, m 75.
Acidi glaciali. acetici.
Cocainæ—alkaloidæ—aa gr. 30.
Collodion, q. s. ad ʒ 3.

M. Sig. Apply a thin coat every night on top of preceding one.—*Ex.*

CAFFEIN TREATMENT OF HEART DISEASE.—In the *Nord Médical*, M. G. Lemoine states that for fifteen years he has given caffein every day to patients suffering from myocarditis, and he feels certain that this treatment has prolonged their lives by avoiding the various discomforts, attacks of oppression and temporary asystole to which they had formerly been subject.

M. Lemoine gives an account of a case in which, owing to the permanent and prolonged use of caffein, the patient enjoyed better health than she had for many years. The author refers to five similar cases, in the most recent of which this treatment has been employed for three years. One case was that of an emphysematous subject with cardiac degeneration, in whom this treatment had been instituted seven years ago, and, owing to the influence of the caffein, he had been enabled to resume his work.

M. Lemoine states that it is not necessary to employ large doses of caffein in order to obtain these results; on the contrary he recommends

weak doses, and as much as possible doses that vary more or less from day to day. This method has the great advantage of not accustoming the organism to the same dose always; consequently it is possible to continue the use of the drug without increasing the doses.

This method he considers the most logical, although, he says, it may be objected to, on the ground of accustoming the organism to a drug and of a physician's being obliged to gradually increase the doses until they become excessive. The author thinks, however, that he has answered this objection in presenting the facts themselves of the case referred to. He concludes that the caffein treatment is indicated in patients who suffer from cardiac weakness due to a disturbance of the pulmonary circulation. He states that he has employed this treatment with admirable results in emphysematous subjects with weak heart disease.—*N. Y. Med. Jour.*

Care of the Mouth.

Perhaps no part of the body is so often neglected as the mouth; especially is this noticeable in the case of children. A mother, who will religiously bathe her child and keep its body sweet and clean, will often fail to clean its mouth. A new-born infant should have its mouth washed after each feeding; a soft cloth wet in a weak solution of boracic acid should be used for this purpose. If this were always done we should rarely find a case of infantile sore mouth.

After the teeth come and the mouth is large enough, a small, soft brush should be used; the teeth and mouth should be thoroughly cleansed at least twice daily.

In illness, where sordes and mucus accumulate rapidly, and where the tongue and lips are parched and stiff, attention is needed every hour; the mouth should be kept moist, and the same treatment carried out through the night as through the day. Boracic acid solution, listerine, lemon juice, glycerine, and distilled water are all refreshing and soften the tissues; where the lips are chapped or fissures appear, a lubricant of cold cream or sterilized vaseline should be applied. Where the gums are spongy or soft and bleed rapidly a few drops of tincture of myrrh added to pure water will help to harden them. Small squares of old linen or soft gauze should be used instead of a brush where one is ill or weak. These should be immediately burned after use.

Every part of the mouth should be cleansed; behind the wisdom teeth, the roof of the mouth, and under the tongue; lemon juice and water will remove the fur from a thickly coated tongue. Where the teeth are sensitive, the water used should be slightly warm.—*South California Practitioner.*

Aphorisms for Children.

1. Animal food once a day and in small quantities, if the teeth can masticate, is necessary to a rapidly growing child.
2. Avoid a too nourishing diet in a violent-tempered child.

5. Avoid seasoned dishes and salt meats, pastry, uncooked vegetables, unripe food, wine and rich cake.

4. Never tempt the appetite when disinclined.

5. Insist on thorough chewing; a child who eats too fast eats too much.

6. Vary the food from day to day, but avoid variety at one meal.

7. Take care that the child's food is well cooked.

8. Wine, beer and confections should never be given to a young child.

9. Give no food between meals; the stomach requires rest, like any other organ than anything else.

10. Remember that over-feeding and the use of improper food kill more children of the body.

11. Give no laudanum, no paregoric, no soothing syrup, no teas

12. Remember that the summer complaint comes chiefly from over-feeding, and the use of improper food, but never from teething.

13. When children vomit and purge, give them nothing to eat for four or five hours.

14. Do not bring a child under three years of age to your table to eat.—*The Dietetic and Hygienic Gazette.*

On the Prognosis of Hysteria ; a Contribution to the Question of Fatal Hysteria.

The author deplores the ignorance with which hysteria is clothed. The theories are varied. As to prognosis, great relief is felt when the case has been diagnosed as hysteria. Most medical treatises either fail to mention the prognosis of hysteria in chapters devoted to the subject, or pass the subject by with a word, and it is very rarely suggested that it may become serious. He takes up the opinion of the majority of writers who believe that fatal hysteria is due either to spasm of the glottis, inanition following hysterical anorexia, or vomiting; or finally to direct or indirect suicide. Then the opinion of the minority that death is never due to genuine hysteria is considered. The author reports at length three cases of hysteria with a fatal termination seen by him during the past two years. Not having discovered an anatomic foundation we are not able to find a pathology. He states, first, that hysteria is as curable as syphilis or consumption; secondly, he believes that the brain or sympathetic nervous system should be held responsible for the disease; third, that hysteria is often fatal. The first case of fatal hysteria reported by the author was a woman 42 years of age. In this case there was no attributable cause for the onset. The second, a woman 43 years old with no attributable cause. The third likewise furnished no attributable cause. The three cases suffered from the disease nine, eight and twelve months respectively. In two autopsies failed to reveal any certain cause for the disease; in the other there was no autopsy. The two cases with autopsy each showed something pathologic; the first two small intramural fibro-

mata of the uterus and the other a cold abscess of very minute size on the left fourth rib. Inference is made that further experience may finally prove that most so called cases of fatal hysteria are the result of anatomic occurrences.—J. FRAENKEL in *St. Louis Medical Review*.

On the Pathology and Therapy of Angina Pectoris.

Dr. Theodor Schott, (*Lancet*, September 8, 1900) adheres to the Stokes-Parry theory of the causation of angina pectoris; i. e., that it is due, not to an increase, but to a further reduction of the muscular energy of a heart already enfeebled. The associated pathological processes are sclerosis of the coronary vessels, alternations of the aortic valves, and ectasic aortitis, which latter has a special stenotic effect upon the origin of the coronary vessels. These conditions together with the resistance of the contracted arterial system, induce weakening of the heart. A moderate distention of the heart may lead to a temporary occlusion of the coronary vessels at the point of an already existing constrictions, and so bring on an attack of angina pectoris. In other cases, a thrombus or embolus may be the cause of the block.

In the treatment of the anginal fit itself, the writer prefers nitroglycerine to amylnitrite. External dry heat is often of service. For the treatment of the heart in the intervals between attacks the author recommends the Nauheim baths, as introduced by himself and his brother, but lays stress upon the fact that advanced sclerosis contraindicates this treatment.—*N. Y. Med. Journal*.

Five Boys at one Birth.

A remarkable birth is reported from Mary's Home, near Jefferson City, Mo., where Mrs. Henry Smith gave birth to five baby boys at one time. They are reported to be well and weigh a total of 30 pounds. Smith has been married less than seven years and is the father of sixteen children. Only one time has there been born a single baby. The others are two pair of twins, two pair of triplets, and the quintette.—*Philadelphia Med. Jour*.

Urotropin in the Treatment of Vesical Catarrh and its Complications.

Dr. E. Suppan (*Wien. Med. Blätt.*, No. 28, 1900) says that this drug is the best we possess for the internal treatment of vesical catarrh and its complications. He thinks that it should always be employed in every case of urosepsis of the aged, with prostatic hypertrophy, in all the non-acute and septic bladder and pelvic catarrhs which are the consequences and complications of this growth, as also in inflammatory conditions de-

pendent upon atrophy of the prostate, neoplasms and diverticulæ of the bladder, and stricture. By the use of this drug the fatal termination may be avoided in many otherwise hopeless cases, and in others its continuous administration may so influence threatening symptoms that the patient may live for many years thereafter without serious disturbance to his health.

The author concludes urotropin is a very efficacious remedy for the treatment of diseases of the urinary passages, being invaluable in certain forms, and there is no other drug in our armamentarium that will take its place.—*Medical Age*.

Chromic Acid for Buccal Lesions.

Jarre announces that local applications of chromic acid promptly cure all inflammatory and ulcerative lesions of the buccal mucous membrane. It should be applied in a concentrated solution and rinsed off at once to restrict its action to the superficial tissues.—*Int. Med. Congress*.

Resorcin in Rodent Ulcer.

Dr. H. Bowen Williams writes to the *British Medical Journal* for December 1st of the case of a woman, aged seventy years, suffering from a rodent ulcer on the left side of the nose for twelve years. He says: "The powdered resorcin was first applied daily, but, as this became painful, on alternate days. Soon an improvement took place. The sore gradually became more healthy-looking; portions of it sloughed; it became smaller and shallower; its shape from being irregular became circular; and finally it healed up entirely. This took place after the application had been in use for two months. It has now been apparently soundly healed for over a month, with, of course, some contraction of the tissues."

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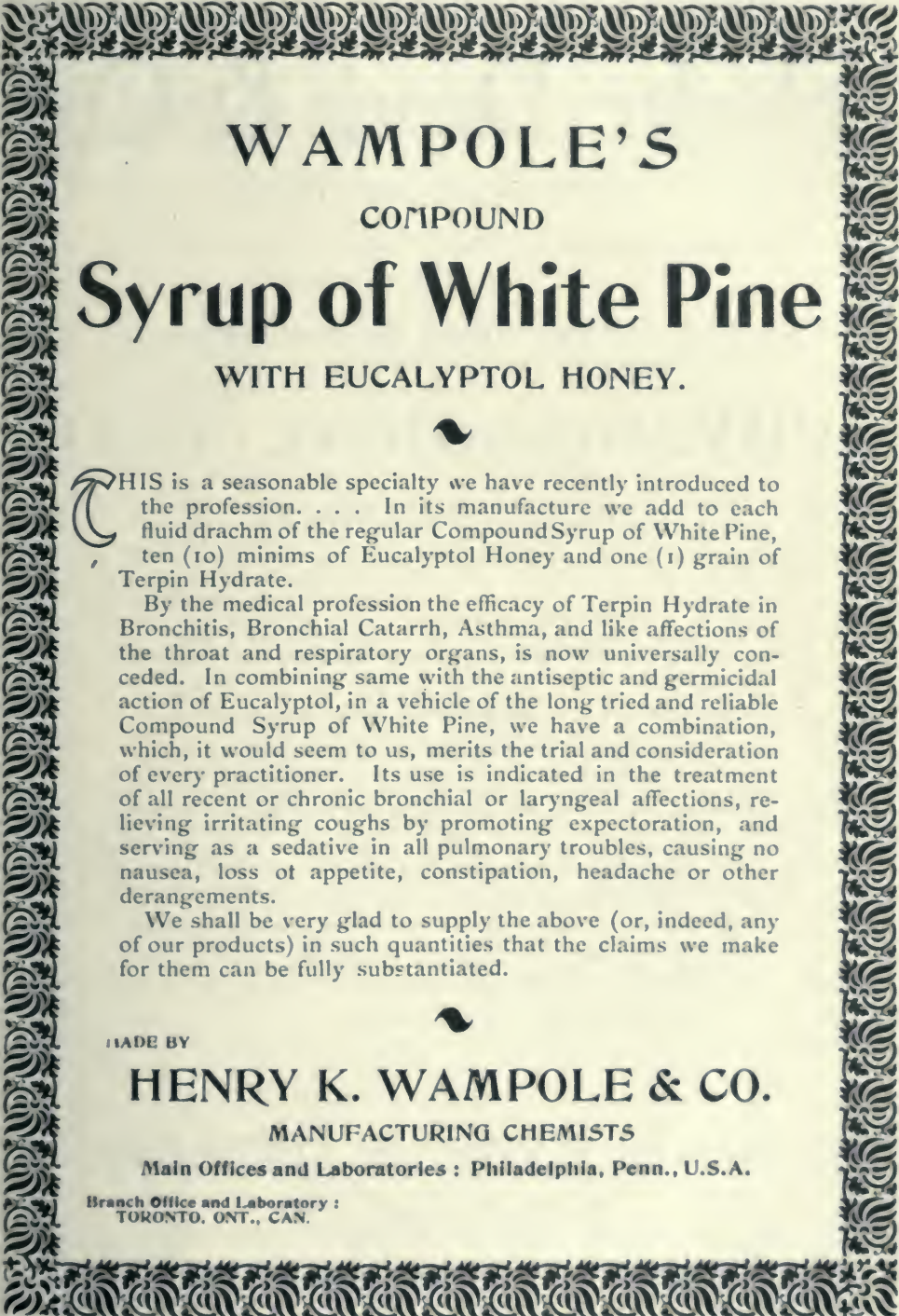
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EDITORIAL.

THE MEDICAL ALLIANCE OF AMERICA.

This is a commercial concern, with a directorate of laymen, and an authorized capital of \$100,000, incorporated under charter from the Dominion Government, with the evident object of exploiting the medical profession. Membership in the Alliance is accorded on payment of one dollar for registration and fifteen cents weekly, in return for which the member is guaranteed medical attendance in sickness or accident, 15 per cent. discount on all medicines purchased and a sum in cash not exceeding \$100, payable in ten years from the date of certificate. The Alliance secures the membership of a number of physicians in various parts of the city, and in case of sickness the lay members are allowed to choose any of the Alliance doctors in his own district. The position and remuneration of the physician is stated as follows:

"In the first place, all medical and surgical practitioners of good standing can become identified with the Alliance, and in return are entitled to share in the fund made up of a small weekly subscription from each subscriber, which is collected and paid out through the medium of

the Alliance. This fund is calculated to provide *as nearly as may be*, \$1.00 for every office call, and \$1.50 for each house visit paid. The fund will be distributed monthly among all practitioners connected with the Alliance in proportion to the amount of work done by each, but not in amounts exceeding the above fees. Any balance after payments made at the above rates will be carried forward to the next month, and any surplus outstanding at the end of the year will be entirely distributed among the practitioners."

"As above stated, *this fund will be made up of minimum weekly subscriptions collected by the Alliance from all subscribers.* . . ."

In other words, if the *minimum weekly subscription* does not suffice to pay the fees mentioned, the doctor will be the loser, not the Alliance.

It is claimed by the representatives of the Alliance that the physician stands to benefit directly by the organization, as he is guaranteed payment from a class of patients who ordinarily pay nothing. This statement is manifestly absurd, for that class of the community will certainly not join any organization to secure the doctor his fees.

The company further claims that their organization does away with the objectionable features of lodge practice, by paying the physician a fair fee for his services and allowing the patient to choose his own physician. This puts the matter before the physician in a very plausible light and to a certain extent it is true. But if the company has no motives other than those stated, why do they require Alliance doctors at all? They would have no difficulty in securing medical attendance on their members for the fees mentioned; they would not then limit the choice of the patient to a certain number of doctors, and the objections to the scheme from a medical point of view would largely disappear. Until more is known of this organization and its practices, the profession should be chary of giving it any countenance or support. We are naturally and rightly suspicious of the motives that prompt any set of capitalists to organize a business which comes in between the physician and his patients. The incentive in the movement is, no doubt, of the same benevolent character operating in the organization of trusts and combines in general.

The Toronto Clinical Society has the matter under consideration and the profession will await with interest the opinion which they will express at an early date.

CHRISTIAN SCIENTISTS HELD RESPONSIBLE.

In an investigation into a case of death from typhoid fever under treatment by Christian Scientists, a coroner's jury at Peterboro, Ont., on Oct. 30th returned a verdict as follows:—

" Francis Emiline Dunlop came to her death from typhoid fever, and the jury are further of the opinion that if the deceased had had proper medical treatment by a physician she would have recovered, and the jury consider that the parents of the deceased were guilty of most inhuman conduct in allowing their daughter to die without making any intelligent effort to save her life, and they strongly condemn the Christian Scientists who professed to treat the deceased, as they had no knowledge whatever of the nature of the disease, and took no steps to ascertain its nature and showed utter ignorance of this or any other disease or any proper method of curing the same, on their own admission under oath.

The jury also wish to express their strongest detestation of the practice of those who ignorantly dare to treat thus lightly with human life, and we consider the practices of so-called Christian Scientists a danger to the community.

And the jurors further wish to express their opinion that for the safety of society some further legislation is necessary, dealing with these people, and we would humbly submit that it is full time that the Provincial Legislature should give this matter their careful consideration."

Another strong verdict condemning the practices of Christian Scientists was rendered by a coroner's jury in Victoria, B.C., on Nov. 28th, on an inquiry into the death of a child from asphyxiation from laryngeal diphtheria. The verdict was rendered in the following words:—

"That the said Claude Oliver Maltby did die upon the 21st day of November, 1900, at Victoria; and that the said Eugene Brooks and Willie W. Maltby did unlawfully kill and slay the said Claude Oliver Maltby, against the peace of Our Sovereign Lady the Queen, her peace and dignity."

These verdicts are healthy indications that the public are becoming aroused to the danger of too great toleration of Christian Scientists, when their practices result in the death of helpless or deluded victims from neglect, or endanger the health of the community from disregard of isolation in communicable diseases. Such cases as those cited with the opinions based on the evidence submitted, must awaken the authorities to the necessity of protecting human life by procuring legislation that will bring the guilty to justice. That the tenets of Christian Science are conscientiously held by certain deluded cranks and faddists is no excuse, in the face of such results from their practices, much as they may desire our pity. When the toleration allowed, however, as is too frequently the case, is taken advantage of by unscrupulous individuals for personal gain, no condemnation is too strong and no punishment too severe for such trafficking in human life.

The juries in question are to be commended for the action they have taken in attempting to suppress a dangerous nuisance.

PRIGGISHNESS IN SCIENCE.

The *Literary Digest* commenting in an article under the above heading in the *Engineering Magazine* alludes to some regrettable features of the inevitable specialism in modern scientific work. "The specialist is apt to lose sight of the whole field of knowledge outside his own speciality, in other words he becomes a narrower instead of a broader man."

The writer of the paper in *The Engineer* has to say on this: "A great deal of harm is done to technical progress in this country by scientific cant. . . . According to scientific cant nothing that is technical is scientific. Science is only concerned with phenomena, and not with their useful application. If you experiment with 37 grams of steel in a Berlin porcelain crucible, or especially in a tiny electrical furnace, with a standardized platinum pyrometer and a spectroscope, you are doing scientific work; but if you work with a ton in a converter, this is merely technical—though you will be patronizingly told that your work may throw some light on scientific questions.

"No scientific man will deny in words that the probable ultimate use to man is the criterion of value of a scientific discovery; but all the same the tacit assumption is that anything technical is unscientific. The common type of scientific man thinks his knowledge of necessity includes all technical knowledge; but he cannot believe for a moment the technologist's knowledge may include his. The result of this sort of scientific priggishness is that technology is discouraged, and made out to be less important than it is, while unimportant work is exaggerated as to its value. Pure science, as it is called, is considered something much higher than applied science."

Too much of the same scientific cant, assumption, and humbug that is here complained of, has of late become noticeable among a certain class of workers in the field of medicine. They would restrict the term "scientific medicine" to the work of the chemical, physiological and pathological laboratories, forgetful of the fact that no length of time spent in these places can ever fit the student, for what after all is the chief end of his calling—the prevention or cure of disease. No one is disposed to deny the great benefits modern medicine owes to workers in these branches, but we must be careful to value the work, so far as our profession is concerned, by the extent to which it is applicable in enabling us to cope with the problems of disease, either in the individual case at the bedside, or the wider field of preventive medicine. The priggishness that would attempt to separate the more purely scientific from the clinical departments of medicine cannot be too strongly condemned. The brilliant discoveries

that have shed such lustre on medical science in the 19th century—those of Lister, Koch, Pasteur, Jenner and others—have been made by practical men—not mere theorists, and their names are revered because the result of their labors has been to protect from disease or to bring relief to countless thousands, the study of the phenomena of disease in the human subject at the bedside or in the morgue is not necessarily less scientific than observations on mice, or guinea pigs, the opinions of self-sufficient egotists, masquerading in the guise of science, to the contrary, notwithstanding. The training in the laboratories is invaluable, but only insofar as it makes a physician more capable and proficient in the active practice of his profession.

A MEDICAL DEFENCE UNION.

The St. Francis District Medical Association is to be commended for the action they have taken looking toward the establishment of a Medical Defence Union operative throughout the Dominion. The objects of the Union are stated as follows:—

I. To support and protect the character and interests of Medical Practitioners practising in the Dominion of Canada.

II. To promote honorable practice, and to suppress or prosecute unauthorized practitioners.

III. To advise and defend or assist in defending members of the Union in cases where proceedings involving questions of professional principle or otherwise are brought against them.

IV. To consider, originate, promote and support (so far as is legal) legislative measures likely to benefit the Medical Profession, and to oppose all measures calculated to injure it. And for the purposes aforesaid to petition Parliament and take such other steps and proceedings as may be deemed expedient.

The annual fee for membership is \$2.50 with a further guarantee up to \$5.00, if required for the purposes of the association, or life membership is accorded on payment of \$100. The provisional executive consists of the officers of the St. Francis District Medical Association. The Union is making application through Dr. T. G. Roddick for incorporation by the Dominion Parliament, and they are also seeking the endorsement of the scheme by The Canadian Medical Association. The formation of such an organization has been advocated by the *Lancet*, and that it is urgently needed there can be no doubt. We think it is a pity, however, that the matter was not taken up by the Dominion Medical Association. The support and influence of the national association would go far towards insuring the success of a movement which is of general interest to the profession.

INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPOEIA.

The publication of an Indian and Colonial Addendum to the British Pharmacopœia of 1898, under the authority of the General Medical Council of the United Kingdom, shows that the medical profession is fully alive to the present wave of Imperialism, which is bringing closer and cementing the various parts of our great Empire. The Addendum contains 59 pages dealing with medicinal plants and other substances suggested for inclusion by Indian and Colonial authorities. The work is provisional and it is hoped that the official recognition of the preparations suggested will stimulate further research into their properties, preliminary to their incorporation into the next Pharmacopœia. The fact that the General Medical Council are not only willing, but anxious, to adapt the Pharmacopœia as fully as possible to meet colonial requirements will certainly be appreciated. The editor, Dr. John Attfield, F. R. S., who has spent much labor in the preparation of the Addendum, is particularly deserving of the thanks of his colonial brethren, as well as of all those who wish to see the bonds of Empire in every field of enterprise or labor, drawn closer. The committee entrusted with the general supervision of the work consisted of Dr. McAlister, Dr. Atthill, Sir Dyce Duckworth, Dr. McVail, Dr. Payne, Mr. Tichborne, Sir John Batty Tuke and Dr. Nestor Tirard.

CORONERS' INQUESTS AND MEDICAL FEES.

The wisdom of the Ontario Government in the matter of fees paid doctors for services rendered in medico-legal inquiries is open to question. At present, for the performance of an autopsy, drawing up a report and afterwards attending and giving evidence at the coroner's inquest, the doctor is paid the handsome fee of \$10.00, with mileage. If on *post mortem* examination in a given case, death is found to be due to natural causes and consequently further legal procedure is rendered unnecessary, the doctor, according to recent interpretation of the law, is only entitled to receive \$5.00 for the examination and report. While the effect of his investigation of the case has been to render the holding of an inquest unnecessary and thus to save the country much expense, he is rewarded for his services by being paid only half the usual fee. The law makes no provision for special bacteriological, microscopic or chemical examinations, which any tyro in medicine knows are frequently absolutely necessary for the proper clearing up of the

case. The neglect of these points in a proper examination weakens the prosecution and results in many a miscarriage of justice.

The fact is, the law appears to take no cognizance of the great advances made in pathology, bacteriology and post mortem technique during the past quarter of a century, nor of the much greater skill and the much longer time required to make an examination according to present methods. The remuneration remains the same during that period, or has been actually reduced. Neither is any distinction made between the most difficult and obscure cases and the simplest routine examinations. In some instances where the cause of death is really not in doubt, as in railway accidents, or in the routine examinations required in cases of death in gaols, where no particular skill or knowledge is required and where the examination is not necessarily exhaustive, the present fees may not be so inadequate. In many criminal cases, however, the greatest amount of experience and skill and the most careful and prolonged investigation is often necessary in order to properly estimate the various conditions found, to obtain all the data possible and to arrive at a satisfactory conclusion. As mentioned before, microscopic, bacteriologic and chemical examinations may be necessary to this end. It is obviously absurd to expect that such an investigation can be conscientiously made for the present fees. The matter should be brought to the notice of the government by our medical representatives in the legislature and if properly represented, no doubt the injustice existing and the necessity for a change would be apparent.

EDITORIAL NOTES.

A Suit for Malpractice.

We regret to notice that the action for damages for malpractice against Dr. J. M. Conerty, of Smith's Falls, still drags through the courts. The details of this case were given in *THE LANCET* a year ago. The prolonged defence of a case in which the complainants are penniless is a genuine hardship in which Dr. Conerty will have the sympathy, and should have the material support of his medical brethren. No better example of the necessity for a medical defence association need be given.

A Heroic Canadian Nurse.

The *New York Sun* relates the story of the heroism of a Canadian nurse, Miss Margaret C. Macdonald of Pictou, N.S., who was wounded in the shoulder in one of the engagements in South Africa, while assisting in

caring for the wounded near the firing line. Notwithstanding the painful nature of the wound, she continued at her post for some time. Miss Macdonald is a graduate of the Charity Hospital Training School, New York, in the class of 1895, and was a nurse in the American army during the operations in Cuba.

Suprarenal Extract in Organic Heart Disease.

Dr. Samuel Floersheim, 218 East 46th St., New York, would like reports from our readers on their experience with this agent as follows:—

1. The condition of the heart and pulse.
2. The effect on the heart and pulse and pulse rate within ten minutes after the suprarenal powder, three grains, is chewed and swallowed without water, by the patient.

Congress on Tuberculosis.

A congress on Tuberculosis, under the patronage of His Excellency, the Governor General, was held in Ottawa on February 14th and 15th. Among others taking part in the meeting were Sir James Grant, of Ottawa, and Dr. Oldright, Barrick, Powell and McPhedran, of Toronto, besides many prominent laymen.

PERSONAL.

Dr. S. J. Farrel, (Trinity '00) who served in the Mounted Infantry in South Africa, has been appointed a civil surgeon.

Dr. F. L. Vaux, (Trinity '96), Dr. L. E. W. Irving, (Trinity '00) and Dr. McRae, (Toronto '97), who held commissions in the Royal Canadian Artillery, have safely returned from South Africa. It is gratifying to note that of the large number of medical students and doctors from Toronto who entered the service, all have returned safe and sound.

Dr. Theo. Coleman, of Toronto, has accepted a position as surgeon to a mining company in the Spanish River District and leaves soon to assume his new duties. Dr. Coleman has been a member of the LANCET staff for some time and we extend to him our best wishes in his new field of labor.

Dr. G. H. McLaren, (Trinity '99) who had recently to resign his post on the resident staff of the General Hospital on account of an attack of pneumonia, has gone to the Bermudas to recuperate.

Dr. J. F. W. Ross has gone to the Bermudas with Mr. Geo. Gooderham and party, where he will remain for a couple of months.

A Canadian Association has been formed in Cleveland with Dr. Calvin Shaw (Trinity '98) as first president.

Dr. Harry Johnston (Trinity '99) is practising in Balaclava, Jamaica.

Mr. W. J. Macdonald, fourth year student, and Mr. W. M. Love, a first year student, in Trinity Medical College who served in South Africa, were given a reception by their fellow students on Jan. 25th. They were each presented with a beautiful gold locket. Mr. Macdonald belonged to the R.C.A. and Mr. Love to the R.C.R.

Dr. J. E. Elliott, of Church St., has been honored with the presidency of the Young Liberal Club of Toronto.

We are glad to learn that Dr. J. T. Fotheringham has returned from The Welland, St. Catharines, fully recovered from the effects of his recent attack of la grippe.

Dr. Perry G. Goldsmith, of Belleville, leaves shortly to spend six months in London and Berlin on eye, ear, nose and throat work.

Dr. Gow, of the resident medical staff of the General Hospital, is convalescent from an attack of la grippe.

Dr. Chown, president-elect of the Canadian Medical Association, sends greetings to the members in a very handsome New Year's card in which he reminds them of the date of the Winnipeg meeting, August 28-31, 1901.

Dr. William Osler, of Baltimore, was in Toronto attending the funeral of his brother, the late B. B. Osler. Dr. Osler's many friends in the medical profession will sympathize with him in his present bereavement.

THE LANCET offers its congratulations to Dr. T. P. McCullough, of Peterborough, on his assuming matrimonial responsibilities.

Dr. G. R. McDonagh, of Carlton street, will be absent from the city on a holiday during February and March to the West Indies.

We are informed that Dr. Graham Chambers and Dr. Walter McKeown have assumed the editorship of our contemporary, the *Dominion Medical Monthly*.

OBITUARY.

DR. JOHN EDWARD WARE.

Dr. John Edward Ware, who practised his profession for many years in Port Perry, Prince Albert and afterwards in Orillia, died at Flushing, Long Island, N. Y., on the last Sunday of the century, at the advanced age of eighty-three years.

Dr. Ware graduated from the University of Buffalo in 1850, and for many years occupied a prominent place in the profession of Ontario. Four years ago he left Orillia to associate himself with his brother-in-law, Dr. Robert Hunter, of New York. The deceased was for many years a member of the Masonic order.

By his upright Christian character, strict performance of duty, kindly nature and uniform courtesy of manner, Dr. Ware gained the esteem of the community in which he lived, and he will be missed by a large circle of friends and relatives.

DR. E. P. ROSE.

We regret to note the sudden death of Dr. E. P. Rose, House Surgeon to St. Boniface Hospital, Winnipeg. Dr. Rose was a graduate of the University of Manitoba and joined the first Canadian South African

contingent. During the campaign he suffered from an attack of enteric fever, was invalided to England, returning to Canada about three months ago, and entered upon his duties at St. Boniface Hospital Jan. 1.

DR. JAMES HARTY KENNEDY.

Dr. James Harty Kennedy died recently at Sault Ste. Marie. The deceased studied at Toronto University and was connected with St. Michael's Hospital for some time. He afterwards practised at Phelps-town, Guelph and Jersey City, and latterly at Sault Ste. Marie. He married a daughter of Mr. J. Dobson, Esq., of Guelph, who, with six children, survives him.

DR. MALCOLM RANEY.

Dr. Ranney, M.R.C.S., died at Georgetown on Feb. 1st. The deceased was an M.D. of Glasgow, and after coming to Canada, practised for some time in Toronto, afterwards removing to Sharon, Ont. In 1857, he married Marion, daughter of the late John Grant, M.D., of Toronto. He leaves three sons, one of whom, Albert Errington, is a student at Trinity Medical College.

DR. CHARLES W. PURDY, CHICAGO.

The announcement of the death of Chas. W. Purdy, M.D., L.L.D., Professor of Clinical Medicine at the Chicago Postgraduate Medical School, will be received with much regret in Canada. Dr. Purdy was a graduate of the Royal College of Physicians and Surgeons, Kingston, Ont., in 1869, after which he went to Chicago, where he soon rose to an eminent place in the profession. He was the author of several works on diseases of the kidneys and allied affections, but probably his best known work is that on Practical Urinalysis and Urinary Diagnosis, possibly the most popular and satisfactory publication of its kind that is to be found in English. His Alma Mater a few years ago conferred upon him the honorary degree of L.L.D., in recognition of his worth. Dr. Purdy was about 54 years of age and by a peculiar coincidence died from Bright's disease.

EDWARD FARREL, M.D., HALIFAX.

We regret to record the death of one of the most distinguished members of the Canadian profession in the person of Dr. Edward Farrel, of Halifax, at the age of 58 years. Dr. Farrel was born in Dartmouth, N.S., and received his early education in that city. He afterwards studied medicine in New York, graduating from the College of Physicians and Surgeons in 1864. He was one of the founders of the Medical Faculty of Dalhousie University, in which he held the professorship of anatomy for a time and afterwards that of surgery. He was a member of the Legislative Assembly in the Reform interests from 1874 to 1878. Dr. Farrel was a most public spirited citizen, taking a deep interest in all that concerned the welfare of his native province and the city in which he lived. His kindly, genial nature and brilliant social qualities made for him hosts of friends among all classes of society, so that his early death has been a matter of the keenest regret.

CORRESPONDENCE.

ABSTRACT OF THE PROPOSED BILL FOR THE TREATMENT OF DRUNKARDS.

The main provisions of this bill are as follows:

In all cities of Ontario having a population of 20,000 or over the police Commissioners empowered to appoint a probation officer to take the supervision of drunkards placed on probation by the Court on suspended sentence. These officers are not to be members of the police force and they are to act more in the capacity of friendly visitors than as informers. They shall also assist the probationer in finding employment when necessary. It will be their duty to investigate for the information of the court, the previous record of persons arrested for drunkenness and to keep records of such investigations and also of all cases placed on probation. In cases where a fine has been imposed by the court, this fine may be paid in instalments by the probationer to the probation officer while the person is on probation.

A medical superintendent shall be appointed by the Government to inaugurate and superintend the medical treatment of inebriates and dipsomaniacs and to assist in establishing, for their treatment, cottage hospitals and special wards in general hospitals throughout the Province. He shall also make local arrangements for the administration of home treatment in suitable cases. The superintendent and probation officers shall co-operate in the work of reformation.

Government grants to promote the medical treatment of dipsomaniacs and inebriates may be made as follows: Cottage hospitals specially established for the reception and treatment of drunkards, or wards in general hospitals specially equipped for this purpose, shall receive as a bonus, twenty-five per cent. of the cost of building or special equipment as the case may be, secondly, a special grant of ten cents a day over and above the usual per capita grant to all hospital patients shall be allowed in cases of chronic dipsomaniacs, and thirdly, an extra grant of forty cents a day shall be allowed, for a period of seven days, for cases of acute alcoholism. The medical treatment not to be considered as a charity but as a loan to be repaid subsequent to treatment and while the person is still on probation.

Able-bodied chronic drunkards instead of being fined or sent to jail shall be sent to the Central Prison for not less than six months and all subsequent sentences to be cumulative. Able-bodied female drunkards shall be sent to the Mercer Reformatory on cumulative sentences. Chronic drunkards, male or female, not able-bodied, may be provided for in county or city houses of refuge.

Three physicians of standing in the Province may be appointed by the Government, as a Committee of consultation, to co-operate without salary, with the superintendent in inaugurating and carrying out the purposes of this bill.

PUBLISHERS DEPARTMENT.

GRIPPAL MEDICATION SIMPLIFIED.

The large and increasing number of deaths especially among our prominent men, due primarily to the prevailing epidemic of La Grippe, and the serious illness of President McKinley from the same cause, impresses us with the advisability of calling the attention of our many readers to the really excellent remedial qualities of the different products of The Antikamnia Chemical Company in the treatment of this scourge and its many insidious allied diseases. For the purpose of reference, we append a list of their various preparations, viz.:

- Antikamnia Tablets
- Antikamnia and Codeine Tablets
- Antikamnia and Quinine Tablets
- Antikamnia and Salol Tablets
- Antikamnia, Quinine and Salol Tablets
- Antikamnia Powdered
- Laxative Antikamnia Tablets
- Laxative Antikamnia and Quinine Tablets

The last mentioned is a new and without doubt a most desirable combination in the above complaints and also in all malarial and congested conditions.

A CASE OF CHRONIC RHEUMATISM.

BY L. B. SMITH M.D., HORNELLSVILLE, N.Y.

Six years ago I had synovitis of the right knee joint following an injury from which I was confined to the house for several weeks, but finally recovered with slight stiffness. In January, 1897, the same knee began to enlarge, which gradually increased until it was at least half as large again as normal. Before this time arrived, the left knee, left ankle, left wrist, right elbow, and right jaw became affected, the latter becoming so bad until I could not place a teaspoonful of food between my teeth. I sat in a wheeled-chair for twelve weeks, during which time I lost flesh and appetite, while sleep was almost out of the question, excepting at short intervals. Before these conditions appeared my urine was loaded with uric acid, and despite all remedies and treatment, could not get rid of it. Being a physician myself, in practice since 1875, I tried everything known to me, and a great many remedies recommended by my brother physicians, but the conditions remained the same, gradually becoming worse. In October, 1898, I was forced to quit work, and went into the Steuben Sanitarium, where I commenced the use of baths, electricity and massage, as well as medicines, following the same for several weeks.

While I improved in some respects the uric acid condition remained the same. When I commenced to take thialion, my strength was almost gone, and to all appearances I was booked for another world. One day, Dr. Walker, superintendent of the Sanitarium, called my attention to an article published in a medical journal, calling attention to the use of thialion in chronic rheumatism, and as it did not bear any symptoms of being a fake preparation, I told him to get me some that I might try it, as I knew of no better subject to experiment on than a doctor. In forty-eight hours my urine was alkaline, an almost inconceivable result. After a few days I only took one dose a day, viz., a teaspoonfull in half a glass of hot water, and I just balanced the urine from slight acid in the morning to slight alkaline at night. In a short time my joints began to decrease in size, and I continued to improve. In July, 1899, I went up in the Catskill Mountains, remaining for six weeks for my general health, which did me worlds of good, and I returned to my home on September 1st, a new man. I then commenced my practice again, and have continued to improve, until now I am as well as ever except a little stiffness of the right knee, which is steadily improving. I still take a little thialion occasionally, as a preventative, as I have had all the uric acid deposits I want in my joints. I weigh now within five pounds of as much as I did before this attack. I never had rheumatism before, and do not expect to have it again. I have used thialion in many cases since, in my practice, with equally good results, sometimes varying the treatment to meet the conditions of the patient. One mistake in all such cases, is that they do not take the medicine long enough, for it has to remove the deposits through the blood, by the alkalinity mentioned. Thialion certainly did for me what no other remedy did (I took everything else, lithia in all other forms gave no result whatever, before taking this preparation). As this is put up only for physicians' prescriptions, I can most certainly recommend it to their use.

EXTRACTS FROM REPORT ON THE PHYSIOLOGICAL ACTION OF PETROLEUM.

By G. Burbidge White, A.B., M.D., Diplomate in State Medicine, University of Dublin, Late Examiner in Physiology, Senior Demonstrator of Anatomy, and Demonstrator of Materia Medica, R. C. S. I., Late Pathologist, Meath Hospital and County Dublin Infirmary, Surgeon to the City Hospital for Diseases of the Skin, Dublin.

In the report which follows, it is proposed to embody the experiments conducted by myself with petroleum, as to its behaviour physiologically in the body, with a view of explaining the clinical effects (which have already been observed and recorded largely) that follow its administration in diseases of various kinds, viz., increase of weight, diminution of catarrh of mucous surfaces, relief of dyspepsia and constipation, relief of flatulence and cystitis, etc. After careful comparative chemical

examinations, ANGIER'S PETROLEUM EMULSION was selected because of its purity, palatability and because it was the best adapted form of petroleum for internal administration.

Research experiments were made from Chemical, Bacteriological, Histological, Physiological and Clinical aspects.

EFFECT FROM FERMENTATION. With regard to the chemical portion of the investigation, in which I was ably assisted by Prof. Kelly, I found that while the Emulsion completely inhibits vinous, lactic and butyric fermentation and the growth of putrefactive bacteria, such as inhabit the alimentary canal, preventing the formation of spirit, lactic acid or foul gases, it has no retarding action upon either peptic or tryptic digestion, both of which we were able to carry on successfully in presence of a very large percentage of Petroleum Emulsion.

AS A SOLVENT AND VEHICLE. Another not less interesting and important fact is that the Emulsion is a solvent of considerable power both of drugs and of animal substances, such as oil and petones which latter it also emulsifies in larger percentages and holds, especially at the temperature of the body, for a considerable time, longer than would be required for absorption from the alimentary canal. Lard, cod-liver oil, clear bacon, fat, etc., are readily dissolved in the Emulsion, as also is butter fat, and an important effect of the mixture of these two substances is that the particles of fat are rendered more mobile, more easily miscible with water and fluids, and these fluids and these solutions on them pour out of glass vessels not clinging to the sides, which can afterwards be rinsed clean with plain cold water.

Petones are freely taken up the Emulsion to 50 per cent. and upwards, and held well in combination without separation, and a somewhat similar effect follows their admixture. The peptones pour more easily, and more quickly diffuse through water and fluids of lesser density, also pour easily and cleanly from glass tubes.

Quite a number of experiments were made to prove these results—as these substances are important factors in alimentation the importance of the effects of mixing the Emulsion with them will be manifest.

BACTERIOLOGICAL EXPERIMENTS. By Bacteriological investigation with the Emulsion, it was found that no organisms could be grown in either pure Petroleum or Petroleum Emulsion; this is doubtless due to its affording no food for their nourishment, owing to the want of the property of chemical combination.

PHYSIOLOGICAL EXPERIMENTS. The rabbit, cat and dog, were selected for the physiological portion of the investigation, which involved much time and trouble in its performance, and was undertaken to study the biological action of the Emulsion in the body. It will be, perhaps necessary to state that the food conditions were equal and constant before and after the administration of the Emulsion, and care was taken to compare similar and not dissimilar conditions; when food was to be introduced into the stomach and bowels, peptone was the food selected in conjunction with Emulsion.

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The Essential Elements of the Animal Organization—
Potash and Lime ;

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And the Vitalizing Constituent—Phosphorus ; the whole combined in the form of a Syrup, with a slight alkaline reaction.

It differs in its effects from all Analogous Preparations : and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs.

It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt : It stimulates the appetite and the digestion ; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS" As a further precaution it is advisable to order in original bottles.

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WHOLESALE AGENTS

MONTREAL

A dog of previously determined weight was denied all food for a period of twenty-four hours and was given instead a quantity of Petroleum Emulsion, equal in weight to the amount of regular food which the dog had consumed in the twenty-four hours previous to the experiment. Under the administration of the petroleum alone the dog lost two ounces in weight. This dog was then given small quantities of food in addition to a minimum amount of **ANGIER'S PETROLEUM EMULSION** and the weight of the animal increased in three days to four ounces in excess of the original weight. This proves that while petroleum in itself is not capable of maintaining body nutrition, given in conjunction with even small quantities of food, it causes an increased utilization of the latter over that possible from food alone, so that the body weight promptly, steadily, and progressively increased.

EFFECT ON DIGESTION. Digestion and assimilation are natural processes, and any product which delays, hampers, or renders more difficult these processes, cannot help but inhibit nutrition. To determine the effect of petroleum on digestion, there was administered in some cases food alone, and in other cases food plus **ANGIER'S PETROLEUM EMULSION** to both persons and dogs, and then extracted the stomach contents for purposes of comparison. It was found that in the cases in which food alone was given, digestion was less rapid and less complete than in those cases to which were administered food plus petroleum. It was further noted in the above experiments that petroleum administered in ten times the regular dose, did not in a single instance induce eructations, gastric distress or toxic symptoms of any kind. These experiments prove that petroleum facilitates and expedites digestion without producing a single symptom indicative of gastric irritation or toxic infection.

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THE CANADA LANCET

VOL. XXXIV.

TORONTO, MARCH, 1901.

No. 7.

ORIGINAL ARTICLES.

*MEDICAL ETHICS AND WHAT PERTAINS TO A PHYSICIAN'S REPUTATION AND SUCCESS.

By HERBERT A. BRUCE, M.D., F.R.C.S., England.

Associate Professor of Clinical Surgery in the University of Toronto.

Your Executive Committee asked me to give you an address this evening on Medical Ethics, and I have taken the liberty of adding to this a few remarks on what pertains to a physician's reputation and success.

In the preparation of this subject I have received many valuable suggestions from a book on the "Young Physician" by De Styrap, and from which I will make many quotations.

The first part of the subject we will consider under the following headings.

First, The duties of physicians to their patients.

Secondly, The duties of physicians to each other.

Thirdly, The duties of the profession to the public.

THE DUTIES OF PHYSICIANS TO THEIR PATIENTS.

1. *Responsibility*. A physician should be imbued with a full sense of the greatness of his work and its responsibility.

2. *Careful attention*. Every case should be treated with care and serious attention.

3. *Secrecy*. Secrecy, when special circumstances demand it, and delicacy in all cases, should be observed. The obligation to secrecy extends beyond the period of professional attendance. No circumstance connected with the privacies of personal or domestic life, observed during professional attendance, should ever be divulged by the physician except when he is imperatively required to do so. So great is the necessity of this obligation that courts of justice protect professional men in their observance of secrecy under certain circumstances.

4. *Prognosis*. Avoid giving gloomy prognostications, for the physician should be the minister of hope and a comfort to the sick. The friends

* Read before the University of Toronto Undergraduates' Medical Society.

should be properly informed of the seriousness of the illness, and, under special circumstances, the patient himself. In the latter case it is generally wise to get the clergyman in attendance, or some near friend, to communicate the gravity of the situation to the patient. This is much less alarming than if the physician does it. Avoid all things which have a tendency to discourage and depress the patient.

5. *Frequency of visits.* Avoid unnecessary frequency in visiting your patients, and do not stay longer than your attention to the patient requires.

6. *Incurable cases.* A physician should not abandon a patient whose case is deemed incurable, for his attendance may continue to be highly useful to the patient and comforting to the friends.

DUTIES OF PHYSICIANS TO EACH OTHER.

1. *Support of professional character.* Every individual, on entering the profession, as he becomes entitled to all its privileges and immunities, increases the obligation to exert his abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of usefulness. He should always uphold the profession and should entertain a due respect for his superiors.

2. *Advertising.* It is derogatory to the dignity of the profession to resort to public advertisements, or cards, or handbills. Any of these are highly reprehensible in a regular physician. In the case of a physician commencing the practice of his profession, or removing to another locality, a simple announcement by an unobtrusive card in the public press is unobjectionable.

3. *Patents.* It is derogatory to professional character to hold a patent for any surgical instrument or medicine, or to dispense a secret nostrum, for, if such nostrum is of real efficacy, any concealment regarding it, is inconsistent with beneficence and professional liberality; and, if mystery alone gives it value and importance, such craft implies disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to permit the use of them.

4. *Professional services of physicians to each other.* All practitioners of medicine, their wives and children, while under the parental care, are entitled to the gratuitous services of any physician whose assistance may be required.

5. *Vicarious offices.* To attend patients for professional brothers is an act of courtesy to be performed with the utmost consideration for the interest and care of the family physician, and when for a short period all pecuniary obligations for such services should be awarded to the family physician. When the attendance is for a long period and the family physician is away in search of pleasure, then the physician in attendance is entitled to the whole fee, or a portion of it, as arranged with the family physician.

6. *Consultations.* Consultations should be encouraged in difficult or protracted cases as they give rise to confidence. A physician should consult with any regular physician. No one is considered a regular

physician, or a fit associate in consultation, whose practice is based on an exclusive dogma such as homœopathy, *et hoc genus omne*. For a legitimate practitioner to meet a homœopath he must ignore the all important fact that their respective principles, in regard to the treatment of disease, are so diametrically opposite as to render an honest consultation, with real benefit to the patient impossible. He should retire from a case rather than act disingenuously to the patient, collusively with the homœopath, and dishonestly towards his legitimate professional brethren.

It may be worth noting that an apt response to the irrational "consultation" outcry, so invidiously raised at times in behalf of the abettors of the principles enunciated in the homœopathic dogma of "*similia similibus curantur*" may be found in the legitimate retort of "*thrasyllos a thrasyllo consilium petat*:" which, freely translated, may be rendered thus "Like should consult with Like."

In consultations the most honorable and scrupulous respect for the standing and character of the practitioner in charge of the case should be observed, the treatment employed by the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for the truth, and no hint or insinuation thrown out which can impair the confidence reposed in him or in any otherwise affect his reputation.

In consultation it is the rule and custom for the consultant, after the usual preliminaries of the conference relative to the history and facts of the case, to take precedence of the family doctor in the necessary physical and questioning examination of the patient. Under exceptional circumstances, however, it will be well that the family attendant should, as an act of confidence and courtesy, be the first to propose the necessary questions, after which the consultant may make such further inquiries as he may deem necessary.

Nothing should be said, by the consultant, indicating an opinion as to the nature of the malady, treatment or proposed issue, in the hearing of the patients or friends, until the consultation is concluded. Both practitioners should then retire to a private room for deliberation. After finishing the consultation, the consultant should communicate to the patient, or his friends, the directions agreed upon, together with any honest opinion which may have been decided upon, and no opinions or prognostications other than those mutually consented to after due deliberation, should be given.

When more than two practitioners have met in consultation an irreconcilable diversity of opinion unfortunately may occur; that of the majority should be acted upon. If the numbers on either side be equal then the decision should rest with the family attendant. It may happen that in an ordinary dual consultation two practitioners fail to agree, an accident much to be regretted and if possible avoided by such mutual concessions as are consistent with the dictates of judgment. If, nevertheless, a difference of opinion exists it would be well to call in a third practitioner and, if that be impracticable, it must be left to the patient the one in whom he would wish to confide.

Whenever a second opinion is desired or suggested by a patient or his relatives, it should, as a rule, be at once courteously acceded to by the

attending practitioner, who, too often, demurs or unwillingly assents under the erroneous impression that a consultation detracts from his professional status; whereas it should be regarded simply as the very natural desire on the part of the relatives to leave nothing undone that might tend to restore the health, or save the life, of the loved one, cost what it may. But, even were it otherwise, it must not be forgotten that the patient has an indisputable right to further advice if he wishes it, and the family attendant will do well, for his own sake as well as that of the patient, to let the responsibility be shared by that of a second practitioner.

It is customary for the family doctor to intimate to the patient, where necessary, what the consultant's usual or expected fee is, and, as far as possible, to see that it be paid at the time, unless there be good reason for deferred payment. However, there is no professional obligation whatever on the family doctor to do so out of his own pocket.

Should the practitioner, who was called in consultation, be subsequently requested to take sole charge of the patient, he should courteously but firmly decline.

All discussions and consultations should be held as secret and confidential. Neither by words nor manners should any of the parties to a consultation assert or insinuate that any part of the treatment did not receive his assent. The responsibility must be equally divided between the medical attendants and they must equally share the credit of success, as well as the blame of failure.

7. *Interference.* A physician, in his intercourse with a patient under another practitioner, should observe the strictest caution and reserve. No meddling enquiries should be made and no hints given. A physician ought not to take charge of, or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency or in consultation with the physician previously in attendance, or when the latter has relinquished the case or been regularly notified that his services are no longer required.

When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be required, resign the care of the patient to the latter, immediately on his arrival. It often happens that in cases of sudden illness or accident that a number of physicians are sent for: courtesy should assign the patient to the first who arrived, who shall select from those present any additional assistance that he shall deem necessary. He should request the family physician, if there be one, to be called and resign the case to him on his arrival. If a physician is called to the patient of a fellow practitioner in consequence of the sickness or absence of the latter, he should resign the case to him upon his return.

When a physician, who had been engaged to attend a case of midwifery, is absent and another is sent for, if delivery is accomplished during the attendance of the latter he is entitled to the fee, but should resign the further care of the patient to the practitioner first engaged.

8. *Differences between physicians.* These should be submitted to arbitration of several practitioners.

DUTIES OF THE PROFESSION TO THE PUBLIC.

Medical men should be ready, when called upon, to enlighten corner's inquests and courts of justice on subjects strictly medical, in regard to the various subjects embraced in the science of medical jurisprudence, but they should insist upon a proper honorarium being paid them. It is the duty of physicians to enlighten the public on the question of quack medicines, and to expose the injuries sustained by the unwary from the devices and pretensions of artful imperics and imposters.

It is desirable to render bills at regular intervals, say every three months, or bi-annually, and in cities it is customary, with many physicians, to render their bills monthly. For the doctor's proverbial delay or neglect in the matter is often attributed to a wrongful motive, and may, indeed, not unfairly be regarded as an incentive to the feeling so forcibly depicted in these quaintly truthful lines:

"God and the doctor were alike adored,
When on the brink of danger, not before,
The danger past, both are alike requited,
God is forgotten, and the doctor slighted."

Intra professional etiquette, or the rule of the profession on commencing practice.

In the absence of any published rule, it is not to be wondered at that young practitioners should be so generally ignorant of the unwritten custom or etiquette—diverse as it is from that pursued in ordinary social life—expected from members of the profession commencing or changing the locality of practice in town or country, and which entails on each new-comer, young or old, an obligation to call, with as little delay as may be, upon every duly qualified legitimate practitioner resident within a reasonable distance of his own selected place of abode, and courteously announce his attention to practice in the locality. In large cities it is obviously impossible for a practitioner to call upon all, and it is not expected of him. A good rule here would be to call upon thirty or forty practitioners who are the nearest at hand.

The question is often asked, what is the professional etiquette? I would venture in reply to define it simply and literally as a conscientious, practical observance in the daily walk of professional life of the divine command, "Whatsoever ye would that men should do unto you, even so do ye also unto them."

So much for the strictly ethical part of our subject. Now let us devote a few moments to the consideration of what makes for success.

It was said of the Napoleonic army that every private soldier bore the baton of a marshal in his knapsack; and it may be written, with equal truth, of the medical profession for the encouragement of those about to join its ranks, that to each practitioner its highest honors and its most distinguished positions are possible of achievement. But, though success is thus attainable by any candidate, if he use proper

means to attain it, it does not follow that, even when attained, it will satisfy the ambition of most men.

If wealth be his goal he has mistaken his calling. "Some of us," says Sir James Paget, "may indeed make money and perhaps grow rich but many of those that minister to the follies and vices of mankind, make much more money than we, and the vast majority practising medicine are only able to make a respectable competence." Where wealth is the highest evidence of success we had better not compete. If social distinction be his aim he could nowhere have hit on a more hopeless choice for he will find the claims of his calling so onerous and so incessant that he will have little time to cultivate those graces and opportunities without which social distinction cannot be won.

With a view to professional success in life, you cannot be too deeply and thoughtfully impressed with the fact that skill in practice consists not only in diagnosis, prognosis, and prescribing medicine, but is the embodiment of all the powers that the practitioner legitimately brings to bear upon the general treatment of his case. In other words, the skilful use of medicine is but one of the many elements that constitute professional skill. You must study mankind as well as medicine, and also bear in mind, when acting upon diseased bodies, that they are possessed with hearts and minds that have strong passions, warm sentiments and vivid imaginations which sway them powerfully both in health and disease. You must be a keen observer of men and things and read the book of human nature correctly.

A certain amount of professional tact and business sagacity, moreover, is as necessary to the medical practitioner as the rudder is to the ship. A quick and sound judgment, good common sense, kind feeling and an instinctive perception of character, in these are the elements of what is called tact which has so much to do with acceptability and success in life.

If you were to ask me, What shall I do to gain success in practice? I would offer these suggestions. First, last, and in the midst of all, you should, as a man and as a physician, always and above all else, keep whatever is honest, whatever is true, whatever is just, and whatever is pure, foremost in your mind and be governed by it.

Partnerships. It is better not to enter into partnership with other physicians. Partners are not, as a rule, equally matched in industry, capacity for work, temperament, tact, and other essential qualities indispensable to a congenial and intimate fellowship, nor are they usually alike cared for by the public; hence, such professional alliances do not, as a rule, prove satisfactory and rarely continue long. The only form in which I could honestly advise it would be a co-partnership for a limited period with an elderly practitioner desirous of retiring. The sooner you learn to depend wholly upon yourself the better. Julius Cæsar said, "I had rather be the first man in a village than the second man in a great city."

The Place of Location. You will find a very considerable difficulty in settling upon a suitable location and I would advise you to carefully consider before deciding to settle in any place. No matter where you

locate, if you are youthful, you will encounter difficulties that older physicians do not. "He looks too young, he lacks experience, etc.," are among the often heard expressions. However, I think the great prejudice to young practitioners is, to a very large extent, dying out. Show the world that you deserve to succeed and success will surely come.

If you settle in a town or city the location and appearance of your office will have a great deal to do with your progress. Select one, if possible, in a good neighborhood, as near as may be to one or more of the main thoroughfares. Remember, in making your selection, that a physician cannot rely on his near neighbors for patronage. People in your immediate neighborhood may never employ you, while those far away may never have anyone else.

Avoid frequent removals and do not shift or change from one place to another, unless it is clearly to better yourself. Reputation is a thing that grows slowly, and every distant removal imperils one's practice, necessitating new labor, and sometimes compels commencing of life over again.

If possible have a good, light, airy, comfortable and accessible office, one that is not used for a family parlor or any accessory purpose. Exercise care in its arrangement: give it a pleasant exterior; make it look fresh, neat and clean outside and snug, bright and cosy inside, thus showing that its occupant is possessed of good taste and gentility as well as learning and skill; and, at the same time, that it is neither a lawyer's consulting room, nor a clergyman's sanctum, nor an instrument-maker's shop, nor a smoking club's headquarters, nor loafing room for the unemployed, nor a social meeting place of any kind, but the office of a live, earnest-working, scientific physician who has a library and takes the journals. Take care, however, to avoid running into a quackish display of instruments and tools, and keep from sight such inappropriate or even repulsive objects as catheters, syringes, obstetric forceps, splints, trusses, amputating knives, skeletons, grinning skulls, tumors, etc.

It is not unprofessional, however, to have about you in your office your microscope, stethoscope, spirit lamp, test tubes, re-agents for testing urine, and other aids to precision in diagnosis, or to hang up your diplomas or portraits of eminent professional friends or medical celebrities.

The consulting room should be of moderate dimensions, small rather than large; the walls and floors well and tastefully covered, articles of furniture few in number but good, and to include a small bookcase, a well designed writing table and chairs to correspond.

Still more important to success will be the nature of the connections you form in your early career, for by such is a young medical practitioner rightly and keenly judged. Let your acquaintance, therefore, be limited, as far as possible, to legitimate professional brethren and people of genuine worth. Be careful to avoid associating with those who labor under a merited stigma or are notable for immoral character, or whose hopes and ambitions have been blighted by their own misconduct. It is scarcely necessary to say, avoid the hotel bar, smoking, billiard and gambling room.

As a further, but minor, aid to successful progress, be courteous and urbane to all classes of patients but do not handshake and familiarize indiscriminately. Undue familiarity detracts not a little from the influence and prestige of juniors.

In regard to your door plate, let it be of strictly moderate dimensions and the name well and distinctly engraved. It is better to put Doctor than M. D., the former not only looks best but has the advantage of being understood by all classes.

A medical man should always be scrupulously neat in person and appearance and should carefully avoid slovenliness and everything approaching to carelessness or neglect, and particularly so in relation to an unsoiled shirt and collar. Conform, as nearly as may be, to the customs prevailing around you. Young says, "Though wrong, the mode comply, more sense is shown in wearing others follies than your own." The dress, manners and bearing of a medical practitioner should be those of a gentleman and in accord with his noble and dignified calling.

I would earnestly impress upon you, in homely language, the telling fact that clean hands, a well shaved face, or neatly trimmed beard, polished boots, spotless cuffs, a good suit of clothes, and a good hat, not only severally indicate gentility and self-respect but impart a pleasurable self-consciousness of being well dressed and presentable, and such should always be the state and position of the well educated medical practitioner.

As to dual occupation.—Many medical men in the country keep drug stores. That is not merely inexpedient but, by entailing additional worry and anxiety, would render the practitioner less capable of fulfilling the responsible and exacting duties of professional life.

Politics.—Shun politics and electioneering tactics, for politics, even when honorably pursued, are ruinous to young physicians' prospects. And, later, when his medical reputation is already extensive, they will militate against him although they may not necessarily ruin him.

There will be some difference of opinion as to the wisdom of what I have just stated but, at any rate, these are my views. I would advise you all to vote according to the dictates of your conscience, but to avoid taking any active part in politics.

Carriage or trap.—As soon as circumstances justify the step it is well to purchase a good looking horse and well appointed trap adapted to the locality. For, such a turnout is not merely a source of health and gratification to a young beginner but tends to indicate to the public an increase of practice—a matter of no little importance in early professional life in so far as many people look upon success as the master test of merit and are often thereby induced to select, as their medical adviser, an apparently busy and rising practitioner. And thus it may be said, and with some degree of truth, that a medical man can often ride into a practice more quickly than he can walk into one.

Medical associates.—You will come across all kinds of qualities in medical practitioners of your particular community. To all let your conduct on every occasion be straightforward and fair; strive to build up a reputation for professional probity and loyalty that will win respect

from all, whether friendly or inimical, and in such wise convince them that you are incapable of any dishonorable act. Avoid all innuendoes and sarcastic remarks to the laity in reference to opponents who may have offended you. Resolve once for all, to remain and act as a gentleman, be the provocation what it may, whether others do so or not. Remember, moreover, that duty and honor enjoin you to act rightly in all cases, not for policy's sake but because it is right. Do not, however, expect a like exactness in an enemy in return, for, were you as chaste as Diana, or as pure as the falling snow, you would scarcely escape misrepresentation by adversaries with jealous eyes and deceitful tongues. Imputations against your skill, unless very gross and damaging, had better be left unnoticed and though it may not improbably reach your ears that someone has remarked that so great was his want of faith in you professionally that he would not allow you to attend his ailing cat or dog, such ill natured observations need not disturb your equanimity nor be taken as personal but simply as expressions indicating a lack of individual faith in your professional ability. Such incidents occur to every practitioner, and, although they grate harshly on the ear of the one affected, they differ altogether from personal libels such as charges of being a drunkard and the like.

Be guarded and circumspect in speaking of the extent of your practice and do not boast of your assumed wonderful cures. All such boastful pretensions are very apt to give rise to envy, disbelief, and adverse criticism.

In addition to keeping abreast with the times in professional knowledge it is well that you should be conversant with general scientific subjects and also with general literature, with a view of putting yourself on a conversational level with the cultured classes of society with whom you may be brought into contact.

Tact, delicacy of perception, the power of winning the patient's confidence, of allaying his fears and comforting him in pain, and at the same time keeping clear of his prejudices, are essentialities of vital importance and should be assiduously cultivated.

Be careful not to indulge in gossip. Take especial care, while in contact with scandal mongers, to keep the conversation if possible on abstract or general topics, and determinately avoid, and if need be, courteously reprove, censorious reflections on individuals in their private affairs. Let your manner, conversation, jests, and the like, ever be chaste and pure. Never forget yourself on this all important point, for nothing can well be more injurious to a medical practitioner than the revelation of an impure mind.

The reputation of being a very nice man is, with many, more potent even than skill. To be both affable and skilful forms a very strong combination and one that is calculated to waft the possessor to the pinnacle of professional success and repute.

Cheerfulness is a never failing source of influence. It is a mistake to think that the science of medicine is gloomy and that a physician should always bear a serious countenance; on the other hand, a bright and cheerful one is very desirable. Approach the sick with grave cheer-

fulness and soft steps and use kind words with them. The possession of humanity, or the lack of it, in a physician can in no way be so accurately judged as when he is questioning and examining the sick. The soothing voice, the soft touch, gentle manner, etc., all do a great deal to soften the pillow of sorrow and affliction.

When called to attend a case, previously under the care of another practitioner, especially if the patient and friends are dissatisfied with the treatment or if the case is likely to prove fatal, do not disparage the previous attendant by expressing the wish that you had been called in sooner, or criticize his conduct or his remedies. It is mean and cowardly to do either. In all such cases do not fail to reply to the questions of the patient, or his enquiring friends, that your duty is with the present and future, not with the past. Refuse either to examine or criticize the superseded practitioner's medicine and treatment. To take mean advantage of any one you have superseded, besides being morally wrong, might engender a professional hornet which in retaliation would watch with malignant eye and sting fiercely whenever opportunity occurred.

Intemperance. The wisest policy for you, as a beginner, is to personally avoid intoxicating drinks and to allow others to do as they think best. And when it becomes known that you abstain from intoxicants you will find that it will greatly enhance your position and reputation. To take a prominent part, however, in temperance, etc., will not only be injudicious but will very likely recoil upon yourself. This forms no part of your special mission and you cannot take an active officious part therein without exciting enmity.

Demeanor. Study to maintain towards your patients a becoming degree of calm and courteously impressive dignity. Frivolous conduct, vulgar jokes, great levity, and undue familiarity are unprofessional and tend to engender contempt and may haply give rise to scandal.

Discourage all attempts to address you with a "Hello Doc" or by your christian name, unless on terms of intimate friendship, or in any way to pass the limit of propriety. Give to everyone his proper title and exact the same in return. Do not, however, misunderstand me and infer that I condemn good fellowship, not so, for when according with good taste and in moderation it is often very appropriate and sometimes acts as a tonic on the drooping spirits of a patient.

Marriage. If it be that you are unmarried it will, no doubt, be often cited against you. Nevertheless, I believe that, de facto, no material professional advantage accrues to a practitioner simply from being married. The substantially true objection lies not in his celibacy, but his youthfulness, and my practical impression is that a like objection obtains in the case of youthful benedict. To marry, therefore, solely with an eye to practice, would be to entail responsibility and expense without corresponding benefit.

Always entertain and show respect for your seniors in practice. There is probably no type of practitioner more unworthy of respect than the one who evinces contempt for his seniors.

Let me earnestly impress upon you the paramount duty of paying all due and proper respect to religion. Your profession will often bring

you into contact with the clergy and ministers of the various denominations and in conscientiously fulfilling your anxious duties you will not only find in them staunch friends but your chief supporters also in many of your most trying cases. When summoned to attend cases of apoplexy, organic heart disease, desperate wounds, or other serious injuries that are apt to end in sudden death, prudence may render it necessary for you to conceal from the patient your own apprehension as to the result lest he should at once lose hope and be driven to despair, which could not fail to exercise a grave and possibly fatal influence. In such cases, however, it will be your duty to give timely and private warning to those especially interested and never, so far as it is possible to avoid it, let any fellow creature pass away from life without apprizing the relatives or friends of the probability of such an event.

It is well that you should, whether a Roman Catholic or not, be cognizant of the duties required at the hands of a medical practitioner by Catholic patients. When in attendance in Catholic families be especially careful in cases of dangerous illness to warn the immediate friends in order that the sufferer may receive the last sacrament.

If in a midwifery case the child of Catholic parents is believed to be in danger of dying it must be baptized.

You should school yourself never to exhibit surprise at any possible event arising out of illness. You will be supposed to foreknow all conceivable things relating to disease, its dangers, its terminations. Even when death has unexpectedly occurred to someone under your treatment, do not let your manner or language indicate that you were altogether ignorant of its possibility, or that you regard yourself in any way to blame.

In every stage of your career be it your aim that your profession is not in concert with death, but, on the contrary, that all its characteristics are indicative of health giving and life restoring power. Neither Hygieia nor her parent, Aesculapius, is represented with the habiliments of mourning but, in place thereof, we see Aesculapius armed with serpents, the symbol of wisdom and convalescence. Remember, moreover, that death is the physician's great antagonist and that when he defeats your efforts and extinguishes the spark of life, your duty ends. Do not then essay (otherwise than mentally) to offer up a prayer or stay and administer draughts to nervous relatives and friends, or tender your services for promiscuous duties such as carrying messages, etc., but, at the earliest fitting moment, quietly withdraw. Leave the laying out of the body and all such matters to friends. Abstain also from visiting the house of mourning for the purpose of viewing the dead, and, except when it is absolutely necessary, avoid attendance at the funeral of deceased patients. More especially refrain from writing apologetic letters to the people expressing self-reproach for failing to recognize this or that fact or regret at not having followed a different plan of treatment. If there are any facts in connection with the case that call for explanation let your communication be made verbally.

Never have recourse to such deceptive tricks as to assure a patient that you will not lance his boil but merely wish to examine it and then

suddenly do that which you assured him you would not attempt. Veracity, so essential in all the relations of life, is invaluable in the several relations between patient and practitioner.

When visiting a patient always let it be known when you will repeat the visit. It will not only satisfy him but prevent all uncertainty and the usual anxious expectancy for the doctor's rap

Make it a study to bear well in mind all that is said and done at your respective visits so that your line of conduct may be sustained throughout the case.

Do not let your wife or anyone else know your professional secrets, or the private details of your cases even though they be not secrets. Nobody likes to have conveyed from house to house what they said in their delirium, or their weaknesses exposed.

Many people labor under the impression that practitioners who injudiciously allow their wives, for the benefit of fresh air, to occasionally accompany them in their professional rounds on driving from the house relate all that has transpired during the visit. Such, of course, is not the case. Nevertheless if people think so the discomforting thought is the same whether it be true or not. There is no end to the mortifications, compromises and estrangements into which a practitioner's wife may not lead him. Nothing is more vexatious and annoying to the feelings of sensitive patients than to hear that the details of their cases are being whispered about as coming from the practitioner or his wife, or others whom he or she had told. Be professionally reticent and never allude to the private affairs of anyone in making your visits.

Medicine. To believe too much in medicine and not to believe at all are both unfortunate mental conditions for those who practice medicine. Take care, therefore, that you do not over-estimate the importance of drugs. Bear in mind the example of the old dame in Paris who filled bottles with water from the Seine, sold it as a cure all, and heard of so many cures wrought by it on all sides that she died convinced that the polluted water of the river was a sure cure for all the ills of the human race. Guard yourself also against the opposite error, that medicines are useless and unnecessary.

Study to be fertile in expedients and never confess or allow the inference that you are hopelessly puzzled about a case, or have reached the limit of your resources. Never give up a patient in acute disease unless the process of dissolution has, de facto, begun. "He is most free from danger who, even when safe, is on his guard."

Fothergill says, "The successful man is the man who knows human nature as well as his profession." Self-reliance and self-possession are very important elements of success. Nothing will cause people to rely on you more readily and steadfastly than to see that you rely on yourself. Be not arrogant or self-conceited but always endeavor to conceal your doubts, hesitations and apprehensions as effectually as possible.

A CASE OF PUERPERAL FEVER TREATED WITH ANTI-STREPTOCOCCUS SERUM—RECOVERY.

BY A. H. GARRATT, M.D.

Surgeon to St. Michael's Hospital, Toronto.

On July 14th, 1897 I delivered a primipara 16 years of age of a female child at full term. The patient was suffering from anasarea, the urine containing much albumen before delivery. Labour lasted twelve hours when the patient showed symptoms of eclampsia and the second stage was terminated with the forceps. The placenta was firmly adherent and was removed by the fingers; the uterine cavity was then irrigated with 1-3000 bi-chloride of mercury, but as the young husband could not afford a good nurse I did not order vaginal irrigations daily.

On the third day after delivery the temperature rose to $100.3.5^{\circ}$, the next morning to 102° , when I anaesthetised the patient and explored the uterine cavity with the finger, finding only a small piece of membrane, which was removed and the uterus again irrigated.

As there was not the slightest bad odor I hoped that this prompt treatment would be followed by a normal temperature.

The next day, the fifth after delivery, the temperature was 105° and the patient had a violent chill.

Then believing I had a case of septicaemia I secured a trained nurse and ordered hot antiseptic vaginal douches every six hours. I also irrigated the uterus once daily for several days and inserted iodoform suppositories. Not being able to secure anti-streptococcus serum in Toronto I telegraphed Parke, Davis & Co. for a supply, and upon its arrival, the eighth day after delivery, an ounce was injected. The following day the temperature was higher than ever before, morning 100° evening $105.3.5^{\circ}$ and the patient again had a prolonged chill. The pulse was 108 in the morning and 120 in the evening. The second day after using the serum the temperature remained the same but the evening pulse is marked 132; another ounce of serum was injected and the following day the patient felt better, with a maximum temperature of 104° . For the next two days the temperature continued to fall and on the 27th the morning temperature was 99° and the evening $102.3.5^{\circ}$.

On the 25th there was a white, creamy discharge from the vagina, quite odorless and very abundant. This may have had as much to do with the improved condition for the next three days as the anti-streptococcus serum.

Dr. H. B. Anderson examined the discharge and found the staphylococcus pyogenes aureus but the blood cultures remained sterile. A number of microscopic examinations were made during this case but streptococci were never found. It was considered advisable to continue the serum, however though the streptococci were not found, thinking it quite possible that they were not "caught on the fly" in passing through the blood. On the

28th the evening temperature again reached 105° and was reduced to 102° by cold packs; from that date for three weeks the evening temperature averaged 105° and anti-streptococcus serum was injected almost daily until the 9th of August when the last injection was given; the evening temperature had averaged $104.1-5^{\circ}$ for four days before the withdrawal of the serum and remained in that vicinity for three days after.

On the fourth day after, August 13th, the morning temperature was 106° the evening $97.2-5^{\circ}$. On August 20th the patient developed pericarditis and had that evening a temperature of $106.1-5^{\circ}$; the next morning it fell to 97° —a difference of $9.1-5^{\circ}$ in 12 hours. This is the greatest variation in temperature reported in the case.

The pericarditis was gradually recovered from and two weeks later a large area of dullness was noticed in the right lung.

This pneumonic inflammation ended in abscess which ruptured into a bronchus a few days later, and the smell from the foul discharge which the patient expectorated until late in September was worse than any bad odor I have ever met with, either *ante* or *post-mortem*.

This metastatic abscess was the last of the pyæmic manifestations and December 1st, 1897, saw the patient with normal temperature and pulse, a good appetite, and with the kidneys, heart and lungs showing no signs of disease.

On looking over the chart there are two places where the antistreptococcus serum might have been given credit for doing some good. On July 25th following one ounce injections of serum the temperature fell $1.2-5^{\circ}$ and remained low for three days.

Again during the daily half-ounce injections from August 4th to 12th the temperature did not run very high or low and there were no chills. From the fact, however, that streptococci were never found in either the discharges or in the blood, one would hesitate to attribute much efficacy to the serum in this case.

The accompanying chart indicates the ranges of temperature during the most serious part of the illness, from which time there was a gradual decline to the normal.

In addition to the treatment already mentioned the patient was given quinine, iron, strychnia and whiskey, with nourishment in some light form every two hours.

* REMARKS ON MEDICAL ASPECTS OF THE WAR IN SOUTH AFRICA.

By J. T. FOTHERINGHAM, M.D.

At the conclusion of Major Nattress' lecture on March 26th, 1900, the chairman called upon Major Fotheringham, Militia Army Medical Staff, who displayed a very interesting collection of small-arm projectiles and explosives, obtained by the kind assistance of the Rice-Lewis Company, Limited, of Toronto, and the Dominion Cartridge, Company, of Montreal.

After apologizing for the purely conversational character of his remarks, Dr. Fotheringham went on to say:—"Any thing from me, Mr. Chairman, and gentlemen, must be purely in the nature of remarks upon the effects of the projectiles, and not upon the projectiles themselves. One of the most striking features of the experience being gained in South Africa at present by the R. A. M. C. is the remarkable preponderance of recoveries over deaths among the wounded in the Hospitals; up to March 12th, 1900, the total casualties were 14,700. A total of wounded in Hospital of 7,673, showed a death-rate of only 347 or $4\frac{1}{2}$ per cent. The main reason of this is the marked absence of bacterial infection of wounds, in addition to the merciful character of the Mauser rifle, which had been almost solely in use by the Boers both on the Modder and in Natal until the later stages of the campaign.

This absence of poisoning of wounds by germs is one mainly to the following causes:—

- 1 The bullet is scraped clean and given practically a new sterile surface in its passage through the bore of the rifle, and by the tremendous friction developed in its flight through the air.

2. The summer khaki of cotton does not tear, but splits clean as if cut by a knife, on the entry of the bullet, and no shreds of fabric enter the wound as a rule. The wounded from Elandslaagte, I may say for the benefit of our chairman and the excellent regiment he represents, showed this in a very interesting way, for the Highlanders, wounded by bullets which had passed through the thick quilted woollen kilts, showed a great preponderance of suppurating wounds over those of other men wounded by projectiles which had passed only through khaki; the same objection held to wound through say a flannel shirt.

3. The air and dust of the veldt is remarkably free from germs, unless in the area actually occupied for weeks as camps, when of course contamination has occurred. Nature's great antiseptic agents, sun, rain, and fresh highly ozonized air, are to be seen in operation then quite as effectively as for instance on our own western prairies.

As regards mercifulness, the following is the order of various projectiles, as determined by the observation of a Naval Medical officer in a recent issue of the Brit. Med. Journal :—

1. Mauser.
2. Krag-Jørgensen.
3. Lee-Metford.
4. Lee-Metford with mark IV. projectile.
5. Any of the first three, with soft nosed projectile.
6. Dum-Dum.
7. Remington brass coated as used by the Filipinos.
8. Remington or Martini-Henry with ordinary leaden bullet.
9. Remington brass coated with point of mantle rubbed off.
10. Shrapnel.
11. Fragments of Shell.

As regards the character of the wounds inflicted, it was found for instance that the wounded after Spion-Kop, in which artillery fire was more severe, were much more seriously hurt than after Colenso where rifle-fire was responsible for nearly all casualties. Gen. Woodgate's much lamented death at Spion-Kop was due to a severe wound of the head by a shell fragment. As an example of ingenuity on the part of a dresser, one man who had had a main artery in the fore-arm cut by a bullet came safely down to Hospital at Chieveley all the way from Spion-Kop, with the main artery above the elbow compressed by a tourniquet in the shape of a plug of tobacco tied firmly on with the tape of a puttie.

Classifying wounds according to the region affected, the most interesting and surprising cases of recovery are seen in those shot through the abdomen. The bowels have been in many cases perforated several times, with no worse results than a short stay in hospital. Even important viscera like the liver and kidney have been traversed by the merciful modern bullet with little worse result than mere shock.

Amputation of limbs have been comparatively rare, and extractions of bullets still more so, as the modern projectile has too great initial velocity to "stand upon the manner of its going."

Wounds of the head and neck constitute also a remarkable class, as many times the head and face have been shot through and the patient has recovered, the bullet fortunately not touching a vital part, and the dreaded blood poisoning not following, for reasons roughly stated already.

One striking feature of the campaign is the comparative frequency of injuries to blood vessels, resulting in aneurism. The wounds of entrance and exit are so small, "bug-bites" Tommy Atkins calls them, that even a large vessel if wounded causes little or no visible bleeding, and so primary hemorrhage is comparatively rare, and the interstitial form more common, in which the muscles and spaces between the tissues slowly fill up with blood—this of course means less shock from sudden interference with blood-pressure in the vessels.

Wounds of nerve tissues also constitute a very important class, such as those followed by inclusion of nerve trunks in scar tissue, necessitating later operations for freeing them; or the obtruding, bruising, shattering effects of the passage near a large nerve of the flying missile. Wounds of

the spinal cord have been found the most fatal, as apart from actual contact of bullet with it the shake or jar to all the tissues near the track of the bullet destroys so sensitive a structure as the spinal cord and causes death usually within a month at most.

I may say a word as to the classification of the wounded in the reports to the War Office. Wounds are officially classified as dangerous, severe, or slight. *Dangerous* wounds speaking broadly are those opening any of the body-cavities as the head, chest, or abdomen. *Severe* wounds are those involving crushing or fracture of large bones, *e. g.* the thigh, or entry of a large joint *e. g.* the knee, or cutting of a large blood vessel if the sufferer is fortunate enough to survive the immediate hemorrhage. *Slight* wounds are mainly flesh wounds, *e. g.* scalp wounds, perforation of muscles, or fracture of small bones.—

I cannot better close any discursive remarks than by an allusion to the absolutely unanimous evidence of the medical officers as to the extraordinary courage and temper of the men. The British soldier has once again abundantly proved himself a gentleman. Old Dr. Samuel Johnson once said in his emphatic way,—“Sir, in my opinion every sick man is a villain. “But here every army surgeon, and every hospital officer, bears testimony to the opposite of that dictum, the willingness to wait till others are assisted, the cheery pluck and patience, the gentlemanly self control of the wounded man. Fredrick Treves, one of the greatest of living surgeons, has thought it worth his while to tell in the *British Medical Journal* how after Spion-Kop an unfortunate private who had lain out for more than an entire day and was finally brought in to Chieveley Field Hospital unable to speak, with a ghastly shell wound of the face in which the whole eye and upper jaw of one side were blown away leaving a blackened cavity in the bottom of which a poor tongue could be seen vainly endeavoring to speak, made signs at last that he wanted to write. When the pencil and paper were brought, what did he write? Not a request for food, or drink, or tobacco, but for information:—‘Did we win?’ Truly in the face of such pluck and temper no one need fear for the traditions of the British Army. No one had the heart to tell the poor fellow the truth of the situation.

CEREBRAL PALSIES OF CHILDREN.

By MESSRS. LUSK and PARSONS,

Final year students of Trinity Medical College.

At the clinic of Dr. Allen Baines, held at the Sick Children's Hospital, a plan originating with Dr. Wm. Osler has been adopted this session. It is for the lecturer to show the case or cases to the whole class and point out the chief symptoms marking the disease; to then appoint two of the final men to write a full and lucid account with etiology, pathology differential diagnosis and treatment in answer to several questions given by the lecturer. This method has evoked the greatest enthusiasm and friendly rivalry in the production of the best paper. The paper here published will show the amount of work and research into the literature of the subject. Any of our readers will be amply repaid by its perusal the latest literature on the subject by many authorities having evidently been consulted. Papers on kindred subjects by others of the class will follow.

A.B.

Cerebral Palsies of Children.

Infantile cerebral palsies are symptoms of a variety of pathological lesions in the brain, just as the paralyses of adult life are dependent upon various processes occurring at different levels and in different regions of that organ.

Historical Notes.

The earliest literature on the subject was contributed by the French, a paper appearing in 1827 describing the pathological conditions which were found in the brain in six autopses. Coutard is credited with having done more than any other Frenchman in elucidating its pathology. In Germany, Henoeh, as early as 1842 wrote concerning atrophy of the cerebrum. Little in England, and Sarah McNutt in America, were the first contributors in these two countries. Weir Mitchell, J. Lewis Smith and Osler in our own day have much increased our knowledge of the subject.

Statistics.

As compared with infantile spinal palsies it occurs in the proportion of about one to two, so that it is a much commoner malady than has been generally supposed. In a collection of 452 cases there were 332 of hemiplegia, 73 of diplegia, 46 of paraplegia and 1 of monoplegia. When contrasted with the cerebral palsies of adult life, the great frequency of diplegias and paraplegias in the palsies of early life is very striking. As regards the age at onset, most of the cases of diplegia and paraplegia are congenital, while the greater number of cases of hemiplegia are acquired after birth; two-thirds of these appearing during the first three years of life. Nevertheless 17 per cent. of hemiplegias are congenital.

Etiology.

Infantile cerebral palsies fall naturally into three groups.

1. Those which have their inception during intra uterine life.
2. Those which result from injury at parturition.
3. Those which are acquired subsequent to birth.

The causes in the cases of pre-natal origin are :

- (a) Trauma to the mother during gestation.
- (b) Serious diseases affecting the mother while carrying the child, particularly such as are septic in character or interfere with the normal circulation, as typhoid fever, pneumonia, uræmic conditions and convulsions.

(c) Fright has been said to have been the cause in one or two cases.

(d) Premature birth at the seventh or eighth month was a coincidence in four or five cases.

(e) Syphilis, in congenital cases, is extremely rarely the cause.

Causes during Parturition.

(a) The slow delivery in primipara, while instruments are often employed in such cases, and sometimes cause injury to the cranium, it is certain that the effects of compression in tedious labour are more commonly the cause of congenital paralysis and idiocy than the application of forceps, a point which the obstetrician should bear in mind.

Causes of the Acquired Paralysis.

The chief cause, accounting for 20 per cent. of all cases, is the infectious diseases of children, as measles, scarlet fever, whooping cough, etc.

Other causes are:—Simple fright, hereditary syphilis, the status epilepticus, and infantile convulsions.

The symptoms may be discussed under the following headings :

- (a) Nature of the onset.
- (b) Form of paralysis.
- (c) Reflexes.
- (d) Deformities.
- (e) Morbid movements.
- (f) Trophic disturbances and associated conditions.

(a) THE ONSET.

Convulsions are exceedingly common, sometimes the actual cause and sometimes an accompanying symptom of the brain lesion. Coma is also very common at the outset. The repetition of convulsions, especially in the form of epilepsy as the disorder advances, is the strongest indication of the involvement of the cortex in the process.

(b) THE FORM OF THE PARALYSIS.

We may have a monoplegia of the arm, face or leg, a hemiplegia, a diplegia, or a paraplegia depending upon the extent of the lesion. Facial paralysis, while frequently included, is one of the first to recover, although traces may often be discovered on close investigation. Aphasia, in children who have learned to talk, may accompany the palsy in left

quite as frequently as in right hemiplegia which is due to the fact that the motor speech centre does not seem to be localized in the left hemisphere during the early years of life. However, defective development of articulate speech is common in all forms, and especially so in congenital and in the earliest acquired cases.

(c) THE REFLEXES.

These on the affected side, are exaggerated except in about 5 per cent. of the cases, where they may be normal, diminished or absent. Sometimes they are difficult to obtain on account of rigidity and contractures.

(d) DEFORMITIES

Rigidity and contractures are striking features in almost all palsies. We may have rigidly flexed elbows, wrists and knees and various deformities interfering with locomotion, as adductor spasm in the thighs causing cross-legged progression, which deformity is nearly constant in diplegia and paraplegia. In hemiplegia, talipes equino-varus is the most frequent deformity. There may be cases in which instead of rigidity and contraction the muscles are completely flaccid.

(e) MORBID MOVEMENTS.

The most frequently observed is the athetosis, which occurs in 20 per cent. of all cases of hemiplegia and occasionally in diplegia. Next the associated movements are common in which the paralyzed hand and fingers imitate the movements of the normal hand. In 5 or 6 per cent. of the hemiplegic cases choreiform movements are found. Ataxia, rhythmical contractions, tremor, and tetanoid contractions are occasionally seen. Nystagmus has been noticed in a few cases.

(f) TROPHIC DISTURBANCES.

The chief form noticed is a *lack of development* in the paralyzed members, therefore the difference in size is often very marked, the earlier the onset of the palsy, the greater the difference.

Stunted growth, and a failure to attain the normal stature is almost always the case.

Epilepsy occurs in 45 per cent. of all forms—in the hemiplegic fully 50 per cent. suffer, and in diplegic 30 per cent., while in paraplegic 36 per cent. of the case are afflicted.

The *Jacksonian* type of epilepsy is seen in about 15 per cent. of all cases.

Feeble mindedness, imbecility, or idiocy occur in over 50 per cent. of the cases, the proportion being in direct ratio to the extent of the lesion.

Pathological Anatomy.

There is usually found present, atrophy of part of the brain, evidence of sclerosis, one or more cysts, or a condition of porencephalus, that is a condition in which there is a cavity leading from the surface of the brain produced by an arrest of development, congenital disease or

hæmorrhage, the last two causing atrophy of the cerebral substance and its replacement by serous fluid. There is not sufficient evidence to establish it as a fact that inflammation of the gray matter of the brain (polio-encephalitis) may cause these terminal conditions.

The changes in the three groups may thus be noted as follows :

I. IN PRENATAL TYPE.

A *true porencephaly* i. e., large cerebral defects or *hæmorrhages* of intra-uterine origin, or a *condition* of lack of development of the cortex, known as *agenesis corticalis*.

II. IN PARALYSES OCCURRING DURING BIRTH.

Here we have *meningeal hæmorrhage*, causing chronic meningo-encephalitis, *sclerosis*, *cysts*, and *atrophies*.

III. IN ACQUIRED PALSIES.

We have (a) meningeal hæmorrhage, as before, or embolism or thrombosis, producing cysts, softening, atrophy, and sclerosis.

(b) Chronic meningitis.

(c) Hydrocephalus, rarely.

(d) Primary encephalitis (Strumpell) which we have shewn before is very doubtful.

Differential Diagnosis between Cerebral Palsies and Acute Anterior Poliomyelitis.

- | | |
|--|--|
| (i.) General appearance, etc. | (ii.) |
| (a) Stunted development. | (a) Rapid atrophy of but one or two limbs. |
| (b) Lack of intelligence. | (b) Child bright and intelligent. |
| (c) Morbid movements, as athetosis and associated movements. | (c) None. |
| (d) Presence of rigidity and contractions. | (d) These occur in late stages. |
| (i') Often congenital. | (ii.) Rarely seen during first six months. |
| (ii.) As to onset—
Coma and convulsions are very common. | (iii.) Both extremely rare. Onset usually very sudden. |
| (iv.) Aphasia may occur. | (iv.) Never. |
| (v.) Reflexes exaggerated, except in 5 per cent. of the cases. | (v.) Reflexes usually lost. |
| (vi.) Muscles react normally to the induced current. | (vi.) Do not react to the induced current, and yield but a sluggish contraction to the continuous current. |
| (vii.) Duration of life is usually shortened. | (vii.) No shortening. |
| (viii.) Epilepsy occurs in 45 per cent. of the cases. | (viii.) Epilepsy is not seen. |
| (ix.) No pain or pressure of paralysed limbs. | (ix.) Pressure may cause considerable pain. |

Prognosis.

A few cases of para and diplegia reach the age of 20 years.

A few hemiplegics attain to 40 years.

Facial paralysis will probably be recovered from.

Paralysis of the leg will usually recover sufficiently for purposes of locomotion

Bilateral paralysis, as regards walking is not so favorable.

Speech will be recovered except in the severest forms, more or less perfectly.

Epilepsy is likely to occur, it being seen in about 50 per cent. of the cases, even if delayed a year or two.

Imbecility and idiocy. A prognosis can only be made after one, two, or even three years from onset.

Treatment.

In cases seen shortly after birth the chief indications are for quiet and careful handling.

For the convulsions, minimal doses of potoss. bromid or chloral, or chloroform inhalation.

In the initial stages of acute acquired forms use cold applications to the head. Empty the bowels as the first steps. Then in a few days, give bromides with the addition of iodides, but the latter must not be allowed to interfere with nutrition. These are for the purpose of securing greater rest.

For the chronic stages, in which relief is usually sought, for the contractures, etc., surgical interference will often give great relief.

For paralysed and contracted muscles, massage and the faradic current may be used.

For the *epilepsy*, the bromides and chloral are used, but practically without success.

For the mental defects, careful manual and intellectual training often work wonders.

A CASE OF LAMINECTOMY.

BY DR. G. A. BINGHAM, TORONTO GENERAL HOSPITAL.

History Taken by F. A. Edwards, Trinity, '01.

J. K.—aet. 26, male. Up to the date of the accident, Aug. 7th, 1899, had never suffered any serious illness. On the above date he was struck by a falling derrick upon the right shoulder and across the back of the neck opposite the *vertebra prominens*, knocking him to the ground. He did not become unconscious but was paralyzed in the right arm and both legs, paralysis being complete as to motor function and almost complete as to sensory function. The phrenic nerve seemed to be much affected, as shown by great difficulty in breathing for a short time after the accident. There was complete incontinence of urine and faeces. Urine was removed per catheter for four days after the accident, after which

there was constant dribbling. This incontinence continued for about two months after which patient could retain the urine for about two hours. The bowels seemed affected in much the same way as the bladder, being as a rule very much constipated.

With the above changes, improvement seemed to follow in the extremities. In about eight weeks the left arm regained its normal function, accompanied a little later by a marked change for the better in the right arm, the right hand not improving so much. Improvement of motion was noticed to a slight extent in hip and knee joints of the right leg but not in the ankle joint. In the left leg only very slight motion returned.

As to sensation, up to this time in the right arm it was very good; in the right leg somewhat affected; in the left arm totally unaffected; in the left leg slight feeling only, previous to operation recorded in this article. About two months after the accident he had pain over the lumbar region, radiating in the direction of the left shoulder but not extending farther upwards than the margin of the ribs. This he seems to think due to his kidneys, but there are no clinical facts that would point to such a cause. Appetite and digestion remained good, and the power of the higher senses, sight, smell, etc., was not impaired. The treatment which the patient had received during the above changes was salt water baths and electricity.

Patient entered Toronto General Hospital on November 2nd, 1899, under the care of Dr. Geo. A. Bingham, who, after a careful examination decided to operate. An incision four inches in length was made in the middle line from near the base of the skull to a point below the seventh cervical vertebra. The laminae of the sixth and seventh vertebrae were removed when it was seen that the fifth was dislocated forward and to the left and was exercising distinct pressure on the cord. This lamina was therefore removed and the wound closed. Healing was by first intention. Operation Nov. 29th, 1900.

Complete paralysis of all the extremities was the first result, no doubt from pressure of exudates. This passed away in a few days. The patient has slowly but surely improved both as regards motor and sensory functions, and to-day, two months after operation, he has fair control over the sphincters, the upper extremities are functionally about perfect, and he is beginning to use the legs to a limited extent. Altogether the prognosis appears quite favorable.

SELECTED ARTICLES.

"COLD IN THE HEAD:" HOW IT MAY BE AVOIDED AND HOW TO TREAT IT.

By GEORGE C. STOUT, M.D.,

Laryngologist and Aurist to St. Mary's Hospital; Instructor in Diseases of the Ear,
Philadelphia Polyclinic, etc.
Philadelphia.

Cold in the head is an acute catarrhal inflammation of the mucous membrane lining of the nose, extending at times to the adjacent sinuses, and manifested by sneezing, hyperemia, hypersecretion, and difficult respiration through the nose. This brief sketch will deal rather with the simple form of acute coryza than the specific forms which occur in the exanthemata or associated with special dyscrasia. Although it is apparently evanescent and self-limited, it is not well to pass it by too lightly, for while it often seems trivial to the physician it is not so to the patient, and it is really one of the most common excuses for recourse to the nostrum vender. Physicians too often consider a head cold unworthy of notice unless the accessory sinuses, the pharynx, or the middle ear have become involved.

Causes.—The chief underlying causes of this trouble is a depressed state of the nervous system, which results in a sluggishness of the heat-producing centers. Such a state may be brought about by excessive mental or physical fatigue, or by a lack of circulatory stimulus from inactivity of mind or body. In other words, the many exciting causes are not prone to bring about a cold unless there is also a relaxed condition of the heat centers. One is more apt to "catch cold" when in the depressed state brought about by a funeral or a dull lecture or meeting than when exhilarated as at a dance, or place of amusement, even though the exposure may be greater under the latter conditions. Sitting idly in a trolley car or train for some time makes one liable to cold. Improper clothing, sitting in a draught, changing from a warm to a cold room, or *vice versa*, are common exciting causes. So, too, the action of irritating matter, such as dust or certain chemical vapors, is a causative factor. Improperly protected feet and failure to promptly change wet stockings are very common causes. Those who are susceptible to colds from slight causes are usually sufferers from some nasal deformity—more commonly hypertrophic rhinitis. The excessive use of alcohol or tobacco is a predisposing cause. Acute colds are rare in old age.

In order that the nose may properly perform its function of heating and moistening the inspired air, the amount of the blood supply and glandular secretion of its lining mucous membrane must be constantly varied to suit atmospheric conditions of temperature, dryness, or moistness, and in order that these changes may take place rapidly the mechanism governing these conditions must be delicately poised: thus the sphenopalatine ganglion and the fifth part of cranial nerves must be in a healthy condition to regulate the blood and glandular supplies, and for them to be in good condition means that the general nervous system should be normal.

Pathology.—In the early stage the membrane lining the nose is turgescient, with a dry surface; this dry stage being shortly followed by a moist one in which there is an exudation of serous fluid, which is saline and irritant. The serous fluid later becoming charged with disquaminating epithelial cells and leucocytes grows thick and cloudy, and still later yellowish. This latter hue is probably exaggerated by the staphylococcus aureus present. Various bacteria have been found in the secretion, but none have been positively identified as the cause.

Symptoms.—These are well known even to the laymen if he resides in latitudes subject to marked temperature changes. At first there is often a sense of dryness and discomfort in the nostrils accompanied by sneezing. There may be fever, chilliness, or in severe cases a distinct rigor. Dull head pains, especially after mental effort, and painful sensations in the muscles or joints, together with a feeling of lassitude, are often present. Following the dry stage by a few hours the secretion becomes excessive, the engorged blood-vessels exuding their liquor sanguinis, which mingles with the disquimated cells. The stuffiness or complete closure of the nares by the swollen erectile tissues adds materially to the discomfort, occasioning mouth-breathing and its concomitants, vocal impairment, sore throat and cough. Should the frontal sinus become involved there is distressing supraorbital headache. This is often the case when congestion only is present in this region, without suppuration. If the antrum of Highmore becomes involved, neuralgic pains in the face and teeth will be experienced. There is often a sense of fulness in the ears, or even deafness, with or without ringing noises from closure of the Eustachian tube orifices. This closure is thought to be a provision of nature to prevent septic infection through the tubes, but if persisted in may lead to middle-ear inflammation. If the orifices of the tear duct under the interior turbinate are encroached upon by the swollen mucous membrane, there will be an overflow of tears on to the cheek. The senses of smell and taste are often lost, and there is at times difficulty in concentrating the attention (aproxesia). The exoriation so often found at the edge of the nostrils is probably in part due to the irritating secretion, but chiefly to undue use of handkerchiefs.

Treatment.—This should be divided into prophylactic, abortive, and curative. Prophylaxis embraces rational clothing, the avoidance of draughts, care of the digestive functions, and maintaining the nervous tone. Too much clothing is more apt to be worn than too little. Those whose life-work is indoors should wear light underwear the year round, and put on heavy outer garments when going out in cold weather. The feet and legs should be especially well protected, and stockings should be changed at once upon becoming wet.

As a preventive measure a brisk dry massage of the body and limbs morning and evening is excellent. This may be reinforced by a laxative tablet of calomel and sodium bicarbonate, and a granule of strychnine sulphate $\frac{1}{16}$ to $\frac{1}{8}$ grain three times a day, or a hot drink at bedtime after a hot foot-bath; then covering up well in bed so as to cause general perspiration; dressing rapidly in the morning, and remaining in the house until the circulation is thoroughly established.

After an attack is fairly started the bowels should be regulated by a saline cathartic, and the nerve tone should be maintained by $\frac{1}{4}$ grain of strychnine thrice daily after meals, or if the discharge from the nose is free the following tablet may be used:

R. Morph. sulph., gr. 1-32;
Strych. sulph., gr. 1-95;
Atropinæ sulph., gr. 1-150;
Acid. arsen., gr. 1-100;
Aconitine, gr. 1-1000.

M. Sig.: One to three daily according to symptoms.

The *local treatment* should be carried out with great gentleness; the patient should be cautioned not to blow or wipe the nose except when absolutely necessary, and then only gently, blowing one nostril at a time while it is entirely free from pressure.

As a preliminary measure the nares should be thoroughly though gently sprayed with an alkaline antiseptic solution, which should pass through the nasopharynx into the mouth. The chief remedial agent is a one-per-cent. solution of cocaine, to which may be added two grains of boric acid to the fluid ounce. When the secretion is excessive and the breathing space nearly closed, a small quantity of this solution should be sprayed into each nostril, barely sufficient to cover the membrane, but not enough to reach the nasopharynx or to run out in front. This should be allowed to rest undisturbed upon the membrane for about five minutes, when it may be followed by a spray of

R. Antipyrin, gr. x;
Aquæ destillat, f 3 j.

M.

This in turn should be allowed to soak for five minutes and then gently blown out, and a coat of the mild chloride of mercury insufflated over the turbinates so lightly that it barely turns the surface gray. This may be followed by an oily protective solution, *e.g.*:

R. Menthol (crystals), gr. v;
Liq. petrolei, f 3 j.

The above procedures should be carried out once daily by the physician.

This treatment, while seemingly elaborate, will shorten the attack and greatly alleviate the symptoms, and it is very simple if the remedies are at hand. Hemming or hawking should be restrained; the motion of swallowing will often relieve the desire to do these; if not, a lozenge of red gum or slippery elm may be allowed to slowly dissolve in the mouth to relieve the tickling sensation in the throat. Pharyngitis or laryngitis if present will be relieved by a spray:

R. Ol. eucalyptol, ℥ ij;
Zinc. sulph., gr. x;
Antipyrin, gr. xl;
Aquæ destillate, f 3 ij.

M.

This should be sprayed into the pharynx and inhaled into the larynx every two or three hours. Frontal sinus pain is relieved by the

above local treatment, to which may be added a hot-water bag across the eyes when the pain is severe. Suprarenal extract has been used to prolong the action of the cocaine solution, but as it aggravates the symptoms in a number of cases I no longer use it. The danger of giving the cocaine habit must be borne in mind, as it is easily done, in spite of authorities to the contrary. The patient therefore should not know what he is getting, and a prescription should never be given containing this remedy. In rare cases which are very aggravated I sometimes give the patient a half-drachm vial of cocaine solution, instructing him to add the contents to an atomizer half filled with an antiseptic solution, as follows:

- R. Sodii bicarb, gr. v;
 Sodii borat, gr. x;
 Listerine, f ʒ v;
 Aquæ, f ʒ iv.

He may spray a small quantity of this into each nostril when the stiffness is excessive; but under no circumstance should he be told what it is.

A capsule composed of the following may be given every two or three hours in place of the anticold tablet mentioned above:

- R. Pulv. opii, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$;
 Camphoræ, gr. j;
 Ammon. carbonat, gr. j to iij.

M.

—*Therapeutic Gazette.*

AN OUTLINE OF A NEW PATHOLOGY.

Diseases of the Clothes.

It has long been vaguely understood that the condition of a man's clothes has a certain effect upon the health of both body and mind. The well known proverb, "Clothes makes the man," has its origin in a general recognition of the powerful influence of the habiliments in their reaction upon the wearer. The same truth may be observed in the facts of everyday life. On the one hand we remark the bold carriage and mental vigor of a man attired in a new suit of clothes; on the other hand we note the melancholy features of him who is conscious of a posterior patch, or the hunted face of one suffering from internal loss of buttons. But while common observation thus gives us a certain familiarity with a few leading facts regarding the ailments and influence of clothes, no attempt has as yet been made to reduce our knowledge to a systematic form. At the same time the writer feels that a valuable addition might be made to the science of medicine in this direction. The numerous diseases which are caused by this fatal influence should receive a scientific analysis, and their treatment be included among the principles of the healing art.

The most distressing cases are those where the patch assumes a different color from that of the trousers (*disimilitas coloris*). In this instance the mind of the patient is found to be in a sadly aberrated condition. A speedy improvement may, however, be effected by cheerful society, books, flowers, and, above all, by a complete change.

IV. The overcoat is attacked by no serious disorders except

Phosphorescentia, or Glistening, a malady which may often be observed to affect the whole system. It is caused by decay of tissue from old age and is generally aggravated by repeated brushing. A peculiar feature of the complaint is the lack of veracity on the part of the patient in reference to cause of his uneasiness. Another invariable symptom is his aversion to out-door exercise; under various pretexts which it is the duty of his medical adviser firmly to combat he will avoid even a gentle walk in the streets.

V. Of the waistcoat science recognizes but one disease.

Porriggia, an affection caused by repeated spilling of porridge. It is generally harmless, chiefly owing to the mental indifference of the patient. It can be successfully treated by repeated fomentations of benzine.

VI. *Mortificatio Tilis*, or Greenness of the Hat, is a disease often found in connection with *Phosphorescentia* (mentioned above), and characterized by the same aversion to out-of-door life.

VII. *Sterilitas*, or Loss of Fur, is another disease of the hat, especially prevalent in winter. It is not accurately known whether this is caused by a falling out of the fur or by a cessation of growth. In all diseases of the hat the mind of the patient is greatly depressed and his countenance stamped with the deepest gloom. He is particularly sensitive in regard to questions as to the previous history of the hat.

Want of space precludes the mention of minor diseases, such as

VIII. *Odditas Soccorum*, or oddness of the socks, a thing in itself trifling, but of an alarming nature if met in combination with *Contractio Pantalunæ*. Cases are found where the patient, possibly on the public platform or at a social gathering, is seized with a consciousness of the malady so suddenly as to render medical assistance futile.

SURGICAL CASES.

It is impossible to mention more than a few of the most typical cases of diseases of this sort.

I. *Explosio*, or loss of buttons, is the commonest malady demanding surgical treatment. It consists of a succession of minor fractures, possibly internal, which at first excite no alarm. A vague sense of uneasiness is presently felt, which often leads the patient to seek relief in the string habit—a habit which, if unduly indulged, may assume the proportions of a ruling passion. The use of sealing-wax, while admirable as a temporary remedy for *Explosio*, should never be allowed to gain a permanent hold upon the system. There is no doubt that a persistent indulgence in the string habit, or the constant use of sealing-wax, will result in

II. *Fractura Suspensorum*, or snapping of the braces, which amounts to a general collapse of the system. The patient is usually seized with a severe attack of *explosio*, followed by a sudden sinking feeling and sense of loss. A sound constitution may rally from the shock, but a system undermined by the string habit invariably succumbs.

III. *Sectura Pantalunæ*, or ripping of the trousers, is generally caused by sitting upon warm beeswax or leaning against a hook. In the

case of the very young it is not unfrequently accompanied by a distressing suppuration of the shirt. This, however, is not remarked in adults. The malady is rather mental than bodily, the mind of the patient being racked by a keen sense of indignity and a feeling of unworthiness. The only treatment is immediate isolation, with a careful stitching of the affected part.

In conclusion it may be stated that at the first symptom of disease the patient should not hesitate to put himself in the hands of a professional tailor. In so brief a compass as the present article the discussion has of necessity been rather suggestive than exhaustive. Much yet remains to be done, and the subject opens wide to the enquiring eye. The writer will, however, feel amply satisfied if this brief outline may help to direct the attention of medical men to what is yet an unexplored field.

STEPHEN LEACOCK.

INFECTION INCREASED BY THE USE OF ALCOHOL.

While direct experimentation upon man for the purpose of determining whether or not the use of alcohol renders him more susceptible to infection, has not been undertaken, but says *Mod. Med.* every physician is fully cognizant of the fact that when an alcoholic habitué becomes diseased, his chances for recovery are much less than those of the total abstainer. The inebriate who contracts pneumonia—a disease to which on account of his indulgence in alcoholic beverages he is prone—stands a very poor chance of recovery. The surgeon also recognizes the inability of wounded tissues of the drunkard successfully to combat infection and to heal by first intention. Because of these conditions the surgeon frequently hesitates to operate upon such an individual.

While these facts have been familiar for years, very little has been done to determine the real cause which in such cases renders the vital principle of the body unable to cope successfully with disease-producing agencies.

Some years ago Dr. Abbott carried on a number of experiments which had a practical bearing upon this subject. His experiments consisted in feeding rabbits upon alcohol, and later inoculating them with some pathogenic micro-organism. The result showed that in every case, control animals were much less susceptible to infection than the animals which had been fed upon alcohol, thus clearly demonstrating that alcohol greatly decreases the ability of the animal body to resist disease.

Dr. Laitinen (*Zeitsch. f. Hyg. und Infect.*, July 19, 1900; *Br. Med. Jour.*, September 23) recently conducted a number of experiments similar to those of Dr. Abbott. In these experiments Dr. Laitinen used 342 animals—dogs, rabbits, guinea pigs, fowls and pigeons. The animals were inoculated with anthrax tubercle, and diphtheria bacilli. These were chosen as types of acute infection, chronic infection, and pure intoxication. A twenty-five-per-cent. solution of ethylic alcohol in water was used in most cases. When employed in greater strength, the alimentary mucous membrane of birds became inflamed. In a few cases dogs were given fifty-per-cent. solutions of alcohol.

The alcohol was administered either by an esophageal catheter, or by dropping it into the mouth by means of a pipette. The dose was graduated according to the weight of the animal, being from one and one-half c.cm. in the pigeon to sixty c.cm. in some of the dogs. It was administered in a variety of ways and for varying times; sometimes in single large doses, at others in gradually increasing doses for months at a time, in order to produce here an acute and there a chronic poisoning. In all cases Dr. Laitinen found that without exception the effect of the administration of alcohol, in any form whatever, was to render the animal distinctly, sometimes markedly, more susceptible to infection than were the controls.

Such convincing proof of the devitalizing nature of alcohol should certainly carry a great deal of weight with it, especially when obtained by such eminent investigators. This, coupled with the practical experience of the physician in dealing with patients who have been in the habit of using alcoholics, should be a warning against the administration of alcohol in any form; for the object to be sought in the treatment of disease is to increase the vital activities of the tissues, and thus render them more resistant to infection.

The administration of alcohol for the purpose of increasing bodily resistance is certainly in nowise a rational or scientific procedure, and its use is certainly not upheld by men who have carefully studied its therapeutic properties.—*Dietetic and Hygienic Gazette*.

ABOUT DWARFS.

By LAWRENCE IRWELL, M.A., B.C.L., of Buffalo, N.Y.

It has long been a matter for discussion whether there ever existed any nations who may absolutely be classed as dwarfs. In many ancient writings are mentioned various races of pygmies as inhabiting the cold northern climes of Scythia, or the tropical deserts of Libya and Asia Minor. Aristotle vouches for the reliability of those witnesses who professed to have seen dwarf men and dwarf horses upon the banks of the Nile; and Pliny gives details of their habits. Herodotus speaks of a race of little men of inky-black color who inhabited a large city on a river which flowed from West to East Lyba, and swarmed with horrible crocodiles. Ctesias, a contemporary of Xenophon, says that he saw in Central India a race of pygmies only two feet in stature; they inhabited a province in which the animals were proportionately small, the sheep being no larger than new-born lambs, and the horses, cattle and asses no larger than a ram. Ptolemy—Claudius Ptolemæus, the celebrated geographer and astronomer—mentions a "little" people called the Pechinians; he describes them as inhabitants of a large portion of the eastern frontiers of Ethiopia. In later times, an English sailor named Battel, who was taken prisoner by the Portuguese about 1590, and carried into Africa, relates in his adventures that he met with a nation of dwarfs called the

"Matimbás." A Dutch traveller, Oliver Dapper, describes a little nation of elephant hunters named the "Mimos," whom he discovered in 1685, inhabiting a district near the Congo river.

Mr. Du Chaillu, writing in 1860, speaks of a strange people, of wild habits, whom he found inhabiting a large tract of land in the country of Ashango; they were called "Ovongos" by their neighbors, the Ashangos, with whom they did not marry. The Ovongos were of hideous aspect, their faces being yellow in color. They were about four feet five inches in height.

People much under the average stature have been found in small numbers in Southern India and in Madagascar, and they are spread widely over the southern half of Africa, where they have been studied in recent years. Their origin is unknown, but they seem to pertain to the Negroid families. Their existence has been periodically reported since the dawn of history, but when the world repudiated the statements of some of the earliest geographers, it rejected the pigmy tribes of whom the ancients wrote, and they were not rediscovered until the second half of this century. The African dwarfs have been distributed into four great groups, viz., those who inhabit West Africa, and who live chiefly in the forests. An adult male is usually between four feet three inches and four feet seven inches in height. The second group is found in the central regions of Africa, and the individuals composing it are sometimes as tall as four feet eight inches. They are skilful hunters, and are nomadic in their habits. The third group lies east of the Nile; I have been unable to discover anything concerning the mode of life of its members; perhaps no traveller has yet visited them. The Bushmen, who live in the Kalahari desert, and who range between four feet and four feet five inches, constitute the fourth group. Our knowledge of all these pygmies is very scanty, but there is no doubt that they really exist.

Dwarfs play a large part in the mythology of the ancient Germanic nations. They were supposed to have their own kings, and to dwell in the interior of the earth, wherein were priceless treasures. It was they who provided the armor for the gods, and they also gave Odin his spear and Thor his hammer. Some of the virtues of the dwarfs are supposed to have been derived from an actual race of small stature—the Lapps, who are said to have occupied part of the Scandinavian peninsula before the immigration of the Gothic peoples. British tradition tells of a "Tom Thumb" at King Arthur's court; and Gulliver's Lilliputians are among the best known of the historic dwarfs.

Prior to the eighteenth century, dwarfs were very frequently retained as court favorites. Of ancient dwarfs, Philetas, of Cos, tutor of Ptolemy Philadelphus, who was born about 330 B C., was said to have worn weights in his pockets to prevent him from being blown away. Queen Henrietta Maria, of France (wife of Charles the First of England), had two dwarfs whose united height is given at seven feet two inches. Geoffrey Hudson, mentioned in *The Peveril of the Peak*, was three feet nine inches tall. Nicholas Ferry, known as Bébé, the dwarf of King Stanislaus, of Poland, was only twenty-three inches in height.—*Interstate Medical Journal*.

MISCELLANEOUS.

Pruritis Vulvae.

This annoying and so often obstinate disturbance justifies frequent reference in journals. Herman (British Med. Journal) makes the following classification, which is most excellent:

1. Adventitious, due to dirt, pediculi, worms or pessaries.
2. Skin diseases—eczema, herpes, or furuncle, follicular urticaria and diabetic dermatitis.
3. Irritating discharges, such as gonorrhea, cancer, senile endometritis; also cases in which no visible discharge is apparent.
4. Venous congestion, due to heart, liver and lung diseases.
5. Nervous affections.

For each division the following treatment is recommended:

1. White precipitate ointment for pediculi. For the other causes, absolute cleanliness and changing of the material of pessaries.
2. For eczema, usually affecting fat, elderly women and those pregnant, when due to pruritic organism, warm hip baths, with liquor carbonis detergens added, and the parts powdered with boric acid. When due to diabetes, general treatment. Herpes zoster did not respond to treatment. For follicular pruritis it is recommended to squeeze out the contents of follicles and apply corrosive sublimate 1 to 2000.
3. Antiseptic and sedative douches, and sedative dusting powders on the vulva, as a saturated solution of borax and solution of boric acid. In case of failure with these try 1 to 7 solution of carbolic acid.
4. The same local treatment as for two with general constitutional treatment.
5. Puritus, when occurring in aged women, is frequently a symptom of degenerate changes and treatment usually fails.—*Buffalo Medical Journal*.

The Cure of Inveterate Cases of Trigeminal Neuralgia.

C. J. Aldrich thus details his plan of treatment. The patient is put to bed under the care of a competent nurse, and receives a thorough examination of all his bodily organs and functions. The next morning he receives an initial dose of castor oil, which is $\frac{3}{4}$ i. if the patient is not taking opiates, and $\frac{3}{4}$ ii. if he has become an habitué or is temporarily using them. A solution of nitrate of strychnine is prepared, \mathfrak{M} i. of which should represent gr. $\frac{1}{200}$. of this solution he receives \mathfrak{M} xx. four times a day as the initial dose, with orders that the dose should be increased one drop every twenty-four hours, being an actual increase of gr. $\frac{1}{200}$ each twenty-four hours. If the patient has been taking morphine, the least possible dose that will relieve the pain is continued for the first

two or three days, after which time the dose is gradually diminished. In addition it may be necessary in cases of arteriosclerosis to give some nitroglycerin. When evidence of atheroma is present, the last named remedy can advantageously be combined with thyroid extract. Aldrich suggests that the good effects of the castor oil may be due to the elimination of some toxic principle which acts as a nerve irritant, thus causing the neuralgia. —*Cleveland Medical Gazette*, November, 1900.

Treatment of Gonorrhœal Arthritis by Poulticing.

The treatment of gonorrhœal arthritis is probably one of the most difficult questions to solve successfully, and when it is recorded that a medical practitioner has treated gonorrhœal arthritis with the best results for eight years by the application of hot poultices, the announcement is worthy of notice. The medical man who has had this favourable experience before he took to this method was in the habit of employing ointments, pressure, ice, salicylic acid, and other remedies, in most cases being compelled finally to opening and washing out the joint. The manner in which he first came to make acquaintance with the therapeutic value of poulticing in this condition was in the case of a severe gonorrhœal inflammation of the knee-joint attended with great swelling and pain; he urged the necessity of an operation upon the patient, but as this was declined a poultice was applied. The immediate results were so good that from that time up to the present he has treated gonorrhœal arthritis in that manner to the exclusion of all other methods, and it would appear further that practically no operations have been necessary. To secure the best results the poultices should be as hot as possible, and also should be changed frequently, night and day. There is nothing new of course in the actual use of a poultice, but to have achieved such a continuous success in the management of so intractable a complaint as gonorrhœal arthritis suggests the wider employment of such an easily applied therapeutical remedy.—*Med. Press and Circular*.

The Operative Treatment of Cirrhosis of the Liver.

C. H. Frazier (*American Journal of the Medical Sciences*, December 1900) reports the case of a patient admitted to the University Hospital in May, 1900, who was a free user of alcohol and tobacco and had contracted syphilis in 1882. The heart was enlarged, and there was a systolic murmur. Both the spleen and liver were enlarged, the upper margin of the liver being on a level with the fifth rib, the lower border extending below the costal margin. The abdomen was distended with ascitic fluid, and the lower extremities were edematous. Medicinal treatment gave no relief. The patient's admission was followed by four tapplings about two weeks apart. The abdominal cavity was opened, and the parietal peritoneum was rubbed with a gauze pad, the omentum being sutured to the parietal peritoneum and to the margin of the wound. The fluid contents of the abdominal cavity were evacuated and

the incision closed without drainage. Convalescence was uninterrupted. Subsequent to the operation the patient was tapped twice; at the first tapping 328 ounces of fluid was withdrawn, and at the second 96 ounces. Since that time there has been no reaccumulation of the fluid.

The writer takes this opportunity to give a review of the reported cases of operation for this condition; they are only fourteen in number, and excluding a certain number of cases in which death was due to causes more or less accidental or avoidable, the actual mortality of the operation is nothing. He believes that the operation has a future in certain selective cases in which the liver is cirrhotic, but in which there is a reason to believe the liver cells are not devoid of function. The operation is indicated where internal medication and paracentesis have failed. The experimental work which has been done upon this subject is very interesting, and shows that it is important to gradually establish the collateral circulation. In case it is done abruptly, toxic symptoms develop, due to the effect of the passage of the blood directly from the digestive organs into the general circulation. Where the circulation is gradually established the capillaries take on the function to a certain extent of the liver cells, inhibiting the passage of unchanged substances from the digestive organs.—MEDICINE.

The Treatment of Loss of Hair.

Jackson (*Journal of Cutaneous and Genito-Urinary Diseases*, August, 1900) has carefully studied 300 private cases suffering from loss of hair. From this study he draws the following conclusions:

"(1) Loss of hair is far more frequent among men than among women. (2) Neither the unmarried nor the married condition exerts any influence on the hair. (3) Intellectual occupations, especially when combined with worry and nervous strain, are predisposing if not exciting causes of baldness. (4) Sixty-six per cent. of the cases of loss of hair begin before the thirtieth year of age. If one passes that age without showing signs of loss of hair his chances for keeping his hair are much increased, as is represented by 36, 17, and 9 for the three following decades. (5) In women general thinning of the hair is the most common form, while the receding temple is uncommon. In men the whole top of the head is most often affected, and the receding temple is very common. (6) The great predisposing cause of loss of hair is heredity, 132 of the 300 cases showing a well marked family history. The influence of heredity is shown in sex, most of the women who lose their hair showing a well marked history on the maternal side; the men showing it on paternal side. Next to heredity all disorders of the general nutrition of the body are predisposing causes. The greatest exciting cause of loss of hair is dandruff, a term used to include seborrhea sicca, pityriasis, seborrhealeczema or dermatitis—72½ per cent. The evil influence of dandruff is greatest in those of a bad family history of loss of hair.

"As to treatment, the best drugs are sulphur, resorcin, and the mercurials, in the order in which they are named. The only stimulant to the hair worth mentioning is massage, and this should not be employed until the dandruff is checked."

In an interesting discussion following this paper Hardaway called attention to the fact that since the discontinuance of the former almost universal habit of oiling the hair, alopecia appears to be more prevalent. Jackson held that the reason that women do not become bald so often as men is partly because they have not gone to barber shops so much in the past, and because their scalp is differently made up. In the women there is always a cushion of fat between the scalp and the skull, while on the man's head this cushion is wanting and the nutrition is not so good. He also lays stress upon the fact the young men at the present day have forgotten their father's instructions to oil the scalp. If they used oil more freely they would often avoid baldness. Sherwell calls attention to the fact that a woman's scalp has a markedly less number of hairs than has a man's, 90,000 as against 110,000 to 120,000.—*Therapeutic Gazette*.

Surgical Intervention in Perforative Cases of Typhoid Fever.

Dr. Osler's paper (*Phila. Med. Jour.*) brings up the question of operative procedure in perforation of the bowel in typhoid fever. It is asserted confidently that a certain percentage of the fatal cases from this complication can be saved by early operation. We are told that such patients bear the operation well, and that in the cases observed the ill-effects have been attributed to the operation itself. Dr. Osler's authority on such a point is important and reassuring. There are some considerations, however, that are not always taken into account. The post-operative effect of the surgical intervention and especially the effect of the anesthesia does not cease with the return to full consciousness and the passing off of the well-known symptoms of shock.

We have caused the patient weakened by his battle with the fever to exhaust still further his waning strength. In the truly terrific primary cardiac stimulation of the anesthetic can such an event fail but to be followed by its period of compensatory lowered vitality? Not perhaps showing itself by marked shock but a progressive asthenic decline. We have merely sounded a note of warning as to the effect of operation *per se* in the course of a progressive febrile affection such as typhoid.

We agree fully in the opinion of the value of operation in perforative cases, and would urge with Dr. Osler the necessity of careful personal observation of the earliest symptoms of the complication. That even the most expert clinicians fail to detect perforation in all cases shows the great need of further knowledge upon the initial symptoms of its onset. Let us pay great heed to every detail, nor think no point of minute too slight to be carefully taken into consideration. The suggestion that typhoid cases be examined carefully upon the slightest occasion, not by an inexperienced interne, but by a trained clinical observer, should be taken to heart. No less valuable is the suggestion, that students receive constant bedside instruction in this disease and not depend upon textbook or lecture. This is a plea for progressive teaching which it should be our duty, as physicians and humanitarians, to preach as gospel.—*Phila. Med. Jour.*

Diphtheria Antitoxin.

Henry F. Koester, in the *Medical News* for January 19th, gives some conclusions formed after six years experience with the antitoxin treatment of diphtheria. He says that antitoxin is a positive cure for diphtheria when employed in sufficient quantity and sufficiently early in the disease. Even when employed too late to produce its specific action, it cannot, under any circumstances, be productive of harm. When used before the invasion of the disease it possesses a positive immunizing power which lasts about 30 days.—*Charlotte Med. Jour.*

Puerperal Fever.

Dr. S. MARX, at a meeting of the Harvard Medical Society of New York, said that puerperal fever is very rarely due to mixed infection. In ninety-five per cent. of all cases of the disease it is due to the streptococcus. When streptococcus serum was first introduced into medicine, there seemed to be good hope that the fatality of puerperal infection might be reduced by it. In twenty-five cases of pure streptococcus infection, however, treated by Dr. Marx with Marmorek's serum, all the patients died, and he will never use it again. The Credé ointment has seemed to be life-saving in one case. The case was one of sapremia, not due to retained secundines, but to a pseudo-membranous affection of the uterus and vagina, for which every remedy including streptococcus serum, had been tried without any improvement. Twenty-four hours after the employment of the Credé ointment the local condition was improved. In forty-eight hours the constitutional symptoms had practically all disappeared. In one of the two cases reported by Dr. Grandin, in addition to the operation, the Credé ointment and streptococcus serum were used. Dr. Marx thinks that the use of the Credé ointment was an important element in the recovery. In another case in which certain septic symptoms had continued for eighteen days, operation was tried as a last resort, but the patient did not recover. At the autopsy military abscesses were found in the lungs and liver, although they had not been noticed at the time of the operation. In extreme cases laparotomy is undoubtedly justified, provided there are no metabotic abscesses; but it is difficult to determine this.—*Medical News.*

Herpes Genitalis.

(M. Gaucher, Paris, *Independence Med.*, 1899).—According to the author, herpes caused by external irritants must be differentiated from that due to internal neuroses. Herpes following some internal disease may be localized on the genitalia. The common causes are, ordinary coitus, sexual excesses, blenorrhagic or chancroidal discharges of the female genitalia. As a modification the constitutional condition must essentially be considered. A local predisposition due to previous venereal disease of the genitalia need not be considered, since many suffer with herpes who never had any venereal disease. For treatment the author uses starch or talcum and alum mixed together. As a systematic treatment, arsenic and sulphur baths.—*Med. Fortnightly.*

Suicide.

Arnold Heller has recently published in the *Münchener medicinische Wochenschrift* some interesting conclusions drawn from a careful analysis of the results of three hundred autopsies on suicides. The fallacy of the belief current in professional as well as lay minds, that such individuals are usually the subjects of some definite mental disease is shown by the fact that this was found in only 5 per cent of the cases. A more important fact, however, is that nearly one-half the subjects, at the time that the act was committed, were in such a state of disturbed mental equilibrium as to be unable to resist impulses, which would ordinarily have left them unaffected. More exactly stated, it was found that 43 per cent. were in such a condition, owing to the early stages of unrecognized acute infectious diseases, the menstrual epoch, pregnancy, etc., as to be temporarily incapable of sound judgment, without being the victims of any actual mental disease. The significance of such a result may be realized when it is considered that this really means that nearly 50 per cent. of these three hundred cases were not true suicides at all in the sense so severely condemned by sociologists and moralists, since the act was performed at a time when the individual was not responsible for his actions, and the inference is that a careful *post mortem* examination should be made by competent pathologists in every case of supposed suicide before it is pronounced as such, with the consequent stigma on the decedents, loss of insurance, and so forth.—*Medical Times and Hospital Gazette*.

Treatment of Epilepsy.

R. Pot. Iodidi.....	dr. i.
Pot. Bromidi.....	dr. i.
Ammon. Bromidi.....	dr. iiss.
Soda. Bicarb.....	gr. xl.
Spt. Chloroformi.....	dr. ii.
Inf. Calumbæ.....	ad. oz. vi.

M. ft. mist. dr. ii. morning and noon, dr. iii. at night.

This is known as Brown-Séguard's perscription.

In the original one Pot. Bicarb. was used, but it has now been changed into Soda Bicarb.—*Medical Times*.

For Haemorrhoids.

R. Vaseline.....	ʒi.
Muriate of cocaine.....	gr. xij.
Morphine.....	gr. xi.
Calomel.....	gr. xl.

M. S. Apply locally night and morning. If itching is severe apply menthol, one drachm to an ounce of vaseline.

Toothache (Guîld).

R. Collodii flexilis.

Acid. carbolic. cryst. aafʒij.

M.—Sig. Apply to cavity by means of cotton probe.

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
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EDITORIAL.

THE ANTITOXIN TREATMENT OF DIPHTHERIA

Possibly no other topic of interest to the therapist has in recent years been more thoroughly discussed, reduced to figures and statistics, than this one. The lapse of time has permitted the clearing up of the case, and the waning of the enthusiasm, in some minds excessive, with which so rational a method of meeting so fatal a disease was met by both the professional and the lay mind. So that we may, perhaps, at this point with profit seek to determine the status of the antitoxin treatment as between the thick and thin supporter of it, and the, to our mind, unreasonable and unjustifiable position taken by those others who deery it.

No doubt it has been many times given when not needed. No doubt many hundreds have recovered without it. No doubt it has some untoward effect in very many cases. The writer has not in some years seen it necessary to use antitoxin in his own practice. But he would still go the length of saying that in *any* severe case, and in *most* nasal cases, and in *all* laryngeal cases, he would feel that he had neglected his duty if he did not use it, and would lie fairly open to a charge of malpractice

if death occurred without its having been employed. And he would not employ it to the neglect of other approved means, sustaining and stimulating treatment by both food and medicines, such as strychnine and alcohol. Particularly would he feel himself aggrieved if shut off from the use of the calomel fumigations so exceedingly helpful in laryngeal diphtheria, or in the case of patients unmanageable under ordinary local applications by swab or spray.

What are some of the arguments used against it? First we are asked to believe that all lessons of bacteriology and physiological chemistry are to be unlearned again, and that because serum therapy in other cases such as tetanus, septicaemia, tuberculosis, pneumonia, typhoid, cholera, is unhappily still devoid of brilliant result, we must therefore *a priori* suspect the efficiency of the diphtheria antitoxin. This is the type of mind which refuses to admit the value of vaccination against small-pox, and those who refuse to acknowledge any merit in the one may fairly be called upon to adopt the same position with regard to the other.

It has been seriously argued that because three or four varieties of rash follow on the use of antitoxin in perhaps 50 per cent. of the cases, or other untoward effects arise such as a temporary arthralgia, therefore the remedy should not be used. Would any one so arguing refuse to his own child the to his mind even problematical advantage, for so paltry a countervailing damage? It has also been held that the albuminuria, nerve-degenerations, septicaemia, bronchitis, pneumonia and other dangerous conditions seen in severe cases after its use are due to its use—the old trap and pitfall, *post hoc ergo propter hoc*, still yawning for the professional as well as the lay mind. If the remedy be used, as it needs to be, only in severe cases, who can say that without its use these complications would not have developed? And in the face of overwhelming statistics from all the countries in which it has been largely used, proving that mortality has been greatly lowered since its introduction, it is idle to seek to explain the facts by theories of acquired immunity, attenuated virus, and so on, though we all know that epidemics vary in severity.

It seems to us that the usefulness of the serum is as definitely established as that of vaccine and lymph in smallpox, and that if we reject the one we must in consistency reject the other, each having disadvantage as well as advantages accompanying its use. The following statements with regard to the remedy we hold to be fully established:—

1. Since its introduction the death rate in diphtheria is much reduced.

2. Ill effects in the course of the disease, such as paralysis, albuminuria, etc., are usually the result of the disease, not of the antitoxin, as—

suming always that the serum is sterile, of sufficient strength and administered with a due regard to technique.

3. The death rate in antitoxin treated cases has been materially reduced since the average dose has been largely increased. A recent writer in the *British Medical Journal* sets 15,000 units as the necessary average within the first 24 hours or so in cases where it is needed at all, and claims that no dose can be large enough to do harm except in the trivial respects already admitted.

4. Failure in its use is usually due to lateness in instituting the treatment, and the later it is begun the more heroic should be the use made of it.

5. As the disease is, under two years of age, extremely dangerous as a rule, it is well to use it in every such case.

6. More particularly, at any age, in nasal cases or whenever large areas of membrane are inundating the system with toxins.

7. Still more particularly in all laryngeal cases when from mechanical reasons life is threatened, or is liable to be at any time, the serum should be given a chance to display its undoubted power, along with intubation or other measures if needed, of detaching membrane and preventing its recurrence.

J. T. F.

NORMAL SALINE SOLUTION IN TREATMENT.

There appears to be a tendency in all things human to go to extremes—a weakness scarcely less noticeable among the disciples of *Æsculapius* than among the general public. There are fads and fashions in the treatment of disease as well as in the cut of a gown. One of the latest examples of this in the field of medicine is the employment of normal saline solution in all sorts of diseases, often with little discrimination or deliberation as to whether the remedy is indicated or not. That it is a very valuable remedy in properly selected cases there can be no doubt. In profuse hemorrhages it maintains the blood pressure by adding to the total volume of blood, and may thus prevent a fatal syncope. In the various toxæmias, especially of Bright's disease, or in puerperal eclampsia it stimulates the excretory activity of the emunctories, so that its employment in these cases has a rational basis, well substantiated by clinical experience. For similar reasons it may be used with benefit in the toxæmias accompanying infective diseases, as in pyæmia or septicæmia and in some cases of pneumonia, where a dilated right heart from pulmonary obstruction is not a marked feature of the case.

There are conditions, however, in which injection of normal saline solution has been recommended or employed with no good reason and

without a proper appreciation of the limitations of its usefulness or the dangers to be guarded against. Foremost among these may be mentioned cases of pure shock, with overloading of the venous system and the right side of the heart; cases of poisoning by opium or other drugs where a similar condition is found. Here the rapid pouring of a large quantity of fluid directly into the already overloaded venous system, or even its slower absorption by the lymphatics, will only add to the embarrassment already present, and perhaps completely paralyze the action of the right side of the heart.

Again, as has been recently pointed out, normal saline solution is not a nutrient fluid, and there is such a thing as practically drowning the tissues by a too free use of it. Besides the danger from over-distention of the right heart, the possibility of producing thrombosis, embolism, phlebitis or other infection should be borne in mind.

Due care in the preparation of the solution should therefore be exercised. Six drachms of sterilized salt to one gallon of sterilized water, used at a temperature of 110°-120° F. gives the proper strength and heat. In cases where rapid action is essential the intravenous method of administration is preferable; also in cases where the tissues are oedematous, and where the patient is practically moribund, for here absorption by the lymphatics might be too slow or might not occur at all. In less urgent cases subcutaneous instillation, as beneath the breasts, or injections per rectum may be employed, with less danger of the untoward results already alluded to. It is necessary to avoid too rapid instillation of the fluid, and it is important to see that it is neither too hot nor yet too cold.

Some authorities recommend the addition of whiskey or other stimulant to the saline fluid on account of the greater stimulant effect thus secured. It must, however, be questionable practice to introduce into the circulation, especially in large amounts, fluids so different from normal blood serum as these necessarily are and caution should be observed until more clinical or experimental data in reference to the effects produced, are forthcoming.

TREATMENT OF EPILEPSY.

There is nothing new to bring forward in regard to the general principles of treatment in this disease. The removal of any exciting cause, any source of reflex irritation and the administration of remedies to lessen the irritability of the motor cells in the cerebral cortex are points that all are agreed upon. Of the drugs recommended, bromide of

potassium, still holds its place as the remedy *par excellence* in the disease, though the bromides of iron, soda, ammonia, lithium, strontium, zinc or arsenic may at times be more useful, either alone or in combination with each other. The drug should be used in doses sufficient to control the convulsions, or until symptoms of bromism are produced, so that large quantities up to $1\frac{1}{2}$ drams daily may be required in some cases. Borax in doses of from 5 to 15 grains is successful sometimes where the bromides fail, and in intractable cases the value of cannabis indica, acetanilid, belladonna, salts of zinc, or digitalis, must not be forgotten. Careful attention to diet and to the action of the bowels is important, so as to avoid alimentary auto intoxication.

The great fault in the management of the disease is not so much in the agents used as in the failure to impress the patient with the absolute necessity of persistent and continuous treatment, extending over a long period of time—for some years at least. Too frequently the doctor sees the patient only at the time of an attack, prescribes, and then loses sight of him until another attack occurs. Preventive treatment, by far the most important, is almost lost sight of. The physician should take the same care in a case of epilepsy as he would in a case of syphilis, to warn the patient of the necessity of prolonged and continuous treatment if a cure is to be hoped for. He should impress him with the fact that every convulsion renders the outlook more hopeless while the prolongation of the interval between attacks is a favourable guarantee of ultimate cure.

Gowers says that the "prognosis of epilepsy is a question of therapeutics. Whatever bromide is employed must be given continuously, that is, the influence must be maintained without interruption. It is necessary to continue the regular administration of it for two years after the occurrence of the last attack of any kind, and then to spend another year in gradually diminishing the dose. Not until the end of the third year is it safe to omit the medicine altogether. This precaution applies to every method of treatment. There is no short method of cure."

If these instructions were faithfully carried out, in many cases cures would be effected, and in others the symptoms so ameliorated that the sufferer's life would cease to be a burden.

NASAL "GENITAL SPOTS" AND DYSMENORRHOEA.

Remarkable results in the treatment of dysmenorrhœa by nasal cocaineization are reported by Schiff (Wien Klin. Woch.). Fliess had previously called attention to the swelling and congestion of the nasal mucous membrane during menstruation, especially at two points—the

front end of the inferior turbinated bone and the tuberculum septi—and stated that the dysmenorrhœa of menstruation could be relieved by applications of cocaine to these points—sacral pain by cocainization of the tuberculum, and hypogastric pain by the turbinate. Schiff's observations fully substantiated these claims. His experience is epitomized in the February number of the *British Medical Journal* as follows:

"His cases were got from the clinics of Schroetter and Chrobak, and were carefully selected by excluding all in which the pain was erratic and did not regularly continue for whole days at each period, and he was very careful in avoiding any possibility of 'suggestion.' He painted the genital spots during the pain with 20 per cent. cocaine solution, and of 47 cases he could regularly produce cessation of the pain in 34. Some cases he observed for months and had more than 200 positive results with cocaine. So little cocaine was used that there was no question of a constitutional effect, and he got the same result with 3 to 5 per cent. solution if he first contracted the nose lining with suprarenal extract. The pain hypogastric and sacral could be painted out bit by bit by taking the genital spots in succession. In 17 of the positive cases he in the menstrual interval cauterized the genital spots with trichloroacetic acid or electrolysis and 12 had no return of the dysmenorrhœa, 3 being under observation as long as from 1½ to 2½ years. In the other 5 he thinks the cauterization was probably not complete. Of the 13 negative cases 9 had been examined gynæcologically, 4 had fixed retroflexion, 2 adnexal disease, and 1 parametritis. Two with normal pelvic organs had marked hysteria. Of the 34 positive cases 24 had been examined; 9 had approximately normal organs and 15 marked pelvic disease, mostly inflammatory. Many of the cases had been under gynæcologically treatment. Perhaps the strongest confirmatory evidence of the constancy of the relation of the genital points of the nose to the pelvic pain was given by a series of experiments beginning with the following observation made on the first patient from Chrobak's clinic. The woman had a large adnexal swelling on the left, and when in presence of several of the staff he touched the left turbinate with the cocaine plug, she, without knowing what he was looking for, said, 'That hurts me so down here,' pointing to the left hypogastrium. This was repeated each time, but with the addition that it was not so sore, till the anaesthesia was complete. A second patient on whom Chrobak had a week before done a ventrifixation for fixed retroflexion, had severe hypogastric dysmenorrhœal pain. When the right turbinate was touched she cried out, 'I feel that down here. That hurts so much down here,' pointing to the right hypogastrium. The left side gave like results, and when the tuberculum septi was

touched she called out loud, 'My back, my back.' She had otherwise no sacral pain. This experiment was repeated by Schiff and by several others, and gave constantly the same results. The details of two other like cases are given, and of 16 women 12 regularly gave these results. In the intermenstrual period this phenomenon could not usually be elicited, but in a few cases with intermenstrual pain it could be got. The importance of this point, especially in the dysmenorrhœa of virgins, is considerable, and in particular the cocanization may be used as a test of the nature of dysmenorrhœa. The application must of course be made exactly by exposing the genital spots by a speculum. Fliess had pointed out a corresponding relation between the anterior end of the left middle turbinate and certain gastralgias, and Schiff was able to confirm this by several observations."

COUNTER PRESCRIBING BY DRUGGISTS.

Several Toronto Druggists have recently been fined for violation of the Ontario Medical Act in prescribing for patients. Some of them have appealed against the judgment and the outcome of the cases will be watched with interest. Wholesale counter prescribing by certain druggists has been indulged in so long, that the toleration of the offence has made the offenders believe that they have some rights in the matter, other than those granted or guaranteed in their license to practice. If in order to properly qualify a man for the practice of medicine, it is necessary that a long course of study be pursued and rigid examinations be passed, it is neither fair nor just to the public, nor yet to the medical profession, that those who have not thus prepared themselves should be allowed to practice medicine, even to the most limited extent. If our friends, the druggists, wish to practice medicine, let them go through the regular course of preparation and pass the proper examinations to qualify themselves and not try to evade the law in this small way. They have no grievance in being prevented from doing that for which they are unqualified, incompetent and without license. The druggist should uphold the rights and dignity of his profession, but should not court the censure of right minded people by wanting to do that for which he has neither a moral nor a legal right.

The courts of British Columbia have recently given an important decision on the same matter, declaring it a violation of the Medical Act of that Province for druggists to sell drugs for the cure of symptoms cited by the patient. The contention of the defence that the druggist acted without hope of compensation was not sustained, the Court holding that compensation lay in the hoped-for sale of his wares.

EDITORIAL NOTES.

Clinical Theatre.

A new clinical theatre has been erected in connection with the General Hospital immediately behind the large operating theatre.

Clinical Laboratory.

The medical staff of Grace Hospital are presenting a clinical laboratory, thoroughly equipped, to that institution.

A Crematory in Montreal.

The authorities in charge of the protestant cemetery in Montreal have received permission from the government to erect a crematory for the incineration of the human dead.

The Medical Alliance of America.

At the regular stated meeting of the Toronto Clinical Society held in St. George's Hall, Elm St., Toronto, on the evening of March 6th, 1901, the following resolution was unanimously adopted :—

That the Toronto Clinical Society is of the opinion that the prospectus sent forth by the so-called Medical Alliance of America, with headquarters in Montreal, is of such a character as to make it very undesirable that any member of the profession should be associated with the Alliance in any capacity whatever.

It is further resolved that a copy of this resolution be published in the first issue of each of the Toronto medical journals.

Toronto City Morgue.

Coroner W. A. Young, at a recent inquest, in vigorous language pointed out the necessity for a properly equipped morgue in Toronto. The present morgue at the foot of Frederick street is certainly a disgrace to any city, let alone one of the size and pretensions of the Queen City of the West. It is without proper water supply, or means of heating; it is filthy and littered with the clothing removed from the bodies of unfortunates who have been taken there for a score of years; no instruments or other facilities are provided for the making of *post mortem* examinations, and there is no accommodation for the holding of inquests. It is certainly unfit to receive anything human, either dead or alive. If the authorities responsible for this scandalous hole were not so absolutely pachydermatous they would pay some attention to the criticisms that have been so frequently offered and have the place removed.

A Remedy for Enuresis.

J. J. Cassidy (Canadian journal of Med. and Surg.) relates three cases of relapsing enuresis, which resisted other methods of treatment, being cured by Fl. Ext. Rhus Glabra in doses of 10-30 drops thrice daily. Two of the cases to his certain knowledge remained permanently cured.

Grave Robbing.

A third year medical student in Queen's College, Kingston, was recently arrested at Peterborough for robbing a grave in order to secure a body for dissection. The charge of robbery was withdrawn by the prosecution, as there was nothing in Canadian law governing such an offence, there being no property in a dead body. He is held for trial, however, at the Assizes, in bonds of \$2,000, on the charge of grave-yard desecration and offering indignity to the dead. The Police Magistrate, in giving judgment, held that while Canadian law did not cover this point, English law, which makes it a punishable offence, would probably be applicable in the present instance. Since more ample provision of dissecting material has been made under The Anatomy Act, cases of this kind in Ontario have fortunately been of very rare occurrence.

PERSONAL.

Dr. J. A. Creasor has removed to 718 Spadina avenue.

Dr. Harry Frank, of Brantford, visited Toronto last week.

Dr. Geo. Rennie has been appointed Medical Health Officer in Hamilton.

Dr. John Marquis, of Brantford, has been appointed physician to the Ontario Institute for the Blind in place of Dr. Sinclair, resigned.

Dr. Fred. Hart (Trinity, '96), of Sault Ste. Marie, visited Toronto last week.

Dr. J. T. Clark and Dr. J. A. Roberts have opened offices on Bloor street at the head of Spadina avenue, in one of the fine houses recently erected by Dr. Ryerson.

We are glad to learn that Dr. G. H. McLaren (Trinity, '99), of the resident medical staff of the General Hospital, has recovered from his attack of pneumonia and is on duty again.

Dr. T. J. Barnett, a native of Almonte, Ont., and a graduate of Queen's University, died from typhoid fever at Sandusky, Ohio, on Feb. 24th.

Dr. H. G. Barrie, Y. M. C. A. representative with the R. C. R. during their service in South Africa, leaves shortly to undertake medical missionary work in China. His engagement to Miss Macdonald, daughter of the late Senator Macdonald, is announced.

Dr. W. H. Weir (Trinity, '97), of Brantford, at one time a member of the resident staff of the Toronto General Hospital, and for the past two or three years a house surgeon at the Lakeside Hospital, Cleveland, leaves shortly to spend some time in post graduate work in England and on the Continent, after which he will take up practice in Cleveland.

Dr. W. A. Henderson (Trinity '98) has begun practice in Sarnia.

Dr. Charles Trow, of Toronto, is spending a holiday in the West Indies, where he expects to remain for a couple of months.

Dr. Jas. Moore (Trinity, '98) is practising with his brother at Brooklyn, Ont.

Dr. J. S. McEachern, of Elmvale (Trinity, '97), has been appointed Associate Coroner for the County of Simcoe.

Much sympathy is felt for Dr. Arthur Jukes Johnson and Mrs. Johnson, of Bloor street, in the death of their little girl from pneumonia.

Dr. Harvey Clare (Trinity '96) of Tweed has been appointed assistant medical superintendent at the Orillia Asylum.

Dr. Herbert A. Bruce has purchased a fine property on Bloor street, at the head of Church street, where he expects to remove in a few months.

Dr. Harry Spence (Tor., '99), recently of the resident staff of the Toronto General Hospital, has passed the examinations for the L.R.C.P. of London.

Dr. Frank Porter (Trinity, '98), of Waubaushe, who recently underwent a serious operation in the General Hospital, we are pleased to learn is making an excellent recovery.

Dr. Alfred Morsen, who practised for many years in Ottawa, died March 3rd at the good old age of 91 years. For the past sixteen years, since giving up active practice, he has lived in Toronto.

Dr. S. P. Ford, of Norwood, one of the best known practitioners in Peterborough County, has accepted the Conservative nomination as candidate in the coming elections for the local legislature.

Dr. Joseph McFarland, formerly Professor of Pathology in the Medico Chirurgical College, Philadelphia, has accepted a position as bacteriologist at the Parke, Davis Co. of Detroit.

Dr. E. H. Stafford, formerly of Toronto, leaves shortly as medical officer with a sealing fleet to Newfoundland. He will be gone for about two months.

The serious illness from pulmonary tuberculosis of Dr. Charles Kearns Deane Tanner, the gifted but rather turbulent member for the Middle Division of Cork in the Imperial Parliament, is reported. Dr. Tanner is 51 years of age. He has a wide reputation as a surgeon, and was formerly lecturer on anatomy in Queen's College, Cork.

The appointment of Dr. Geo. Landerkin, formerly M.P. for South Grey, to the Dominion Senate has met with general approval, both within and outside the medical profession. The genial and facetious Senator, who is 63 years of age, will have the best wishes of his professional brethren for many years in which to brighten the Upper House with his presence.

We are pleased to learn that Dr. Jas. Third, of Kingston, has improved considerably from the serious condition of a fortnight ago, so that his friends entertain hopes of his ultimate recovery. Dr. Third, who is an old Trinity graduate and a member of the resident staff of the Toronto General Hospital in 1891, was recently appointed to the professorship of medicine in Queen's University in succession to Dr. Fife Fowler.

OBITUARY.

Dr. James E Eakins

On February 15th Belleville lost a prominent and highly respected citizen in the death of Dr. James E. Eakins after a lingering illness. Dr. Eakins was physician to the Deaf and Dumb Institute for many years.

Dr. A. MacDonell.

Dr. A. MacDonell, one of the best known and most popular practitioners in the District of Rat Portage, died at midnight, March 6th, from heart failure, following a severe attack of pneumonia. Deceased was born at Alexandria, Glengarry County, Ont., about 47 years ago, and came west when 20 years of age.

Dr. Michael Lavell

A prominent figure in the medical profession of the province has passed away in the death on February 18th of Dr. Michael Lavell, of Kingston, at the advanced age of 76 years. Dr. Lavell was appointed surgeon to the Kingston Penitentiary in 1872, and afterwards held the post of warden to the same institution from 1888 to 1895. He was also at one time a professor in the medical faculty of Queen's University.

BOOK REVIEWS.

A TREATISE ON MENTAL DISEASES.

By Henry J. Berkely, M.D., Clinical Professor of Psychiatry John Hopkins University, Chief Visiting Physician to the City Insane Hospital, Baltimore, D. Appleton & Co., New York, Geo N Morang, Toronto

The above work is a decided departure from the ordinary work on mental diseases in that it brings diseases of the mind before the general practitioner in such a manner that he must feel he is dealing with tangible disease of the brain, just as he finds disease in any other organ of the body, and consequently placing mental disease on a physical basis rather than a purely psychic one.

Part I., devoted to anatomy and histology, is very clear and fully up-to-date, comprising all the essential elements of the central nervous system in the light of the most recent research, the final structure of the nerve cell being elaborately discussed. In Part II., General Pathology is considered, and the relations between the degenerative and non-degenerative types of insanity. The influence of infections and auto-intoxications in the evolution of mental disease marks one of the important features of this work, and is particularly instructive, aiding much to a clearer comprehension of the role these agents play in the production of deranged mental states. The gross and special pathology are fully discussed and the plates showing the changes in the vessels and cells are excellent. In Part III., the clinical forms of mental diseases are considered, and the idiopathic insanities are clearly and concisely described. The same may be said of the description of insanities following organic lesions of the brain. It is, however, in regard to the intoxication insanities and those following bacterial toxalbumic and autogenic poisoning that this work

will be of especial service to the general practitioner. The symptoms of the various forms of chemical poisoning such as are due to alcohol, cocaine, opium, etc., are succinctly given and their treatment exhaustively dealt with. The description of the insanities of the puerperal period, particularly in regard to their causation, contains much of interest, while that of the autogenic intoxications is probably to the physician in general practice one of the most useful in the book. The auto-intoxications from fermentation or imperfections of the digestive processes as evinced by the presence of an excess of indican and skatol in the urine are fully described, and we entirely agree with the author that probably a larger quantity of these agents is absorbed than the amount in the urine would indicate, the blood consequently being rendered the more toxic by them. That the presence of these ethereal sulphates in the urine is due to the decomposition of albumin under the influence of bacteria is important in regard to treatment, indican being absorbed from the small intestine and skatol probably from the larger bowel. In this connection intestinal antiseptics is brought prominently into notice, and there is no doubt but that strict attention to this point will hereafter aid in the treatment of this class of cases to an extent which has never been realized in the past.

The chapter on paranoia gives a concise and lucid description of the development and symptoms of this remarkable affection, its entire course from its insidious incubation, over the borderland of sanity through the persecutory and ambitious periods to final weak mindedness, being clearly detailed.

The chapter on neurasthenia and the neurasthenic psychoses is one of much interest, but we regret not being able to agree with the author on one point which he here discusses, viz., the frequency with which neurasthenia oversteps the boundary line into the psychoses, since we believe that this termination is much less rare than the author would indicate. The exciting cause of neurasthenia and the idiopathic insanities is largely the same; over-exertion of the brain with the consequent derangement of functions of the cells of the higher centres. That definite microscopic changes, which may speedily disappear, take place from slight stimulation of a nerve cell has already been demonstrated, and also, that as a result of prolonged over-stimulation the cell will regain its normal appearance, even under favourable conditions, only with difficulty, if at all. Hence with this physiological cause common to both, their relations in effect must necessarily be intimate, and we believe that the early study of many cases of melancholia, for example, between the period of mental health and that in which the symptoms of mental derangement become pronounced, would reveal a stage of cerebrasthenia. The importance of this relationship is three-fold. (1) It would tend to place certain mental diseases on a firmer physiological basis; (2) it would direct attention to the earliest symptoms of derangement of cell function instead of delaying until this derangement of function had produced insanity, and (3) attention so directed would lead to the treatment of these cases at a period when it might still be possible to restore the cell function and avert insanity.

The chapter on idiocy and imbecility is worthy of commendation, the divisions for clinical purposes being essentially useful.

In conclusion we consider this work a decided advancement in this branch of medicine, and we have much pleasure in heartily recommending it to the student or general practitioner who desires to obtain a book which is fully up-to-date, and which will convey a knowledge of mental diseases in a concise and practical form precisely as these diseases are encountered in the routine of every day practice.—D. C. M.

STUDIES IN THE PSYCHOLOGY OF SEX.

The Evolution of Modesty; the Phenomena of Sexual Periodicity; Autoerotism, by Havelock Ellis. Philadelphia, New York, Chicago. F. A. Davis Company, Publishers, 1901.

The author sketches the main outlines of a complex emotional state which is of fundamental importance in sexual psychology, bringing together evidence from widely different regions and suggesting a tentative explanation of facts that are still imperfectly known.

Those interested in the subject will find a mass of information regarding the sexual history of peoples and nations of all colors and creeds, and in this the main value of the book lies.—F. F.

A SYSTEM OF PRACTICAL THERAPEUTICS.

Edited by Hobart Amory Hare, M.D., Professor of Therapeutics in Jefferson Medical College, Physician to Jefferson Medical College Hospital, Philadelphia. Second Edition Revised and Largely Re-written. Lea Bros. & Co., Philadelphia and New York, 1901.

Volume I. of the second edition of this well known work has been received. It contains nearly 850 pages, dealing with general therapeutic considerations, prescription writing, remedial measures other than drugs, diathetic diseases, and diseases of nutrition. Among the contributors are H. C. Wood Burney, Yeo, Simon Baruch, W. M. L. Coplin, James Stewart and Ralph Stockman, names which in themselves are a guarantee that the subjects with which they deal are brought fully up to the present standard of knowledge. This assumption is certainly borne out by a critical review of the various articles dealt with. While representing what is latest and most approved in scientific treatment, the work is essentially practical and will prove of the greatest value to the practitioner in his every-day work. The doctor who has this work in his library can feel assured that he has placed at his disposal descriptions of all that is really useful in the treatment of disease at the present day. The work is certainly deserving of the most cordial reception at the hands of the profession.

PUBLISHERS' DEPARTMENT.

CLINICAL NOTES AND COMMENTS.

Dr. T. D. Crothers, Editor, *Quarterly Journal of Inebriety*, in the January, 1901, number, writes: "Antikamnia has become one of the standard remedies, particularly in influenza. It is prepared with various drugs in tablet form, the latest, a laxative tablet, with quinine and some mild cathartics, called 'Laxative Antikamnia & Quinine Tablets.' All of these forms are very attractive and palatable. We have never seen a case of addiction to antikamnia, hence we prize it very highly as one of the most valuable remedies for diminishing pain without peril. We have used it with excellent results to quiet the pain following the withdrawal of morphia. We have received from this company many complimentary notices shawing the vast influence it has secured among regular practitioners. The object of the antikamnia in 'Laxative Antikamnia & Quinine Tablets' besides its antipyretic and analgesic effect, is the prevention of all griping, nausea and other unpleasant effects generally produced by purgatives when administered alone."

A TWENTIETH CENTURY RESUME.

With the dawn of the new century, it is both interesting and profitable to pause and consider the events and achievements of the past years, decades and centuries, and to "take stock" as it were, of our present national resources and conditions. The Government Census for 1900 enables one to appreciate how wonderfully our common country has progressed and improved in every material good; how our industry and commerce has enlarged and expanded; how our territory and population has increased and how rich we are in all that makes toward prosperity and advancement. It would indeed be a liberal education had one the time and opportunity to consult and examine the magnificent collection of statistical matter comprised in the returns of the twelfth census. Realizing, however, that such a mass of facts and figures is too confusing for the average mind, the makers of Lactopeptine, Liquid Peptonoids and Hemaboliods are engaged in compiling and arranging a 64 page book, entitled "Facts and Figures, Medical and Otherwise, from the Census in 1900 and Other Reliable Sources." Fully one-half of this volume (32 pages) is made up of full-page colored lithographic maps and schematic diagrams, illustrating in a thoroughly clear, concise and graphic manner the most interesting and important subject matter, so that the reader can comprehend and appreciate it at a glance.

The following are some of the more interesting and important statistics thus graphically illustrated: "Accessions of Territory"—a map of the United States, showing by means of contrasting colors, our original territory and subsequent accessions, with the dates, amounts, paid and from

whom purchased or ceded: "Distribution of Population by States"—a map similarly vari-colored, showing at a glance the comparative density of the population of each State and territory; Increase and Decrease of Population, 1890-1900"—illustrating the per centage of increase of each national subdivision; similar maps of Cuba and Porto Rico respectively. Of medical and climatological interest are maps and diagrams illustrative of the comparative mortality of the various infectious diseases in the twelve principle cities of the United States; Diphtheria mortality of New York, Massachusetts, Philadelphia, England, London, Chicago, Berlin, Paris, and etc., showing graphically the pre- and post-antitoxine death rate; mortality from anesthetics; ratio of deaths to inhalations; maps showing variations of altitude, sunshine, rainfall, etc., of different sections of the United States; schematic design showing comparative elevation above sea-level of the principle health resorts, with climatological and meteorological data relating to each. Other attractive charts represent the division of the population of each State and territory as regards city and country dwellers; color, race, etc., etc.,

If we kept on, this notice would resolve itself into a table of contents of one of the most interesting, useful and instructive books of reference and general information ever published, either forgratuitous or paid circulation. The manufacturers of LIQUID PEPTONIDS, HEMABOLOIDS and LACTOPEPTINE, who intend to present this handsome, artistic, instructive and unusually expensive souvenir to their friends in the medical and dental professions will be pleased to receive and file requests for same.

PARIS EXPOSITION, A. D. 1900.

Awarded highest prize to William R. Warner & Co. in their class for the recognized superiority based upon the following claims:

The Exhibit consists of Soluble Sugar and Gelatin Coated Pills, Parvules, Dosimetric Granules, Elegant Granular Effervescent Salts, Compressed Tablets, including a series of Effervescent Tablets, comprising Lithia Water, Kissingen Water and Vichy Water Tablets; standard Medicinal Fluid Extracts, Medicinal Elixirs, Syrups and Wines, and a line of Superior Pharmaceutical preparations made in accordance with the recipes indicated by the United States Pharmacopeia, the formula of famous medical men and specialties of original invention.

MESSRS. WARNER & Co. claim for Soluble Coated Pills, and Granules, quick solubility, accurate subdivision of the drug, the use of selected excipients in making the mass, avoiding incompatibility and insuring quick disintegration and a thorough assimilation of the medicament. The inner mass is thoroughly protected from atmospheric influences by the soluble coating as applied, presenting at once a form of medicine which is reliable and permanent and not affected or impaired by age. They possess decided advantages over the ordinary pill of the pharmacy, extemporaneously prepared, in that the minute division of powerful chemicals is more readily reached by accurate processes and facilities invented and used specially for the purpose.

For Granular Effervescent Salts, they claim uniformity of granulation, prompt effect of the applied remedy and general elegance of the finished product.

Claim for Effervescent Lithia Tablets, convenience, reliability, uniformity of dosage, whereby a Lithia Water can be made extemporaneously of a standard strength and known dosage, added to which is the economy of the product.

For Medicinal Fluid Extracts claim a product of standard strength, prepared according to the latest approved processes, representing the active principles of the drug employed, each minim of the solution representing one grain of the ground drug from which all inert matter has been eliminated.

Claim for Medicinal Elixirs, Wines and Syrups, a feature in elegant pharmacy whereby remedies, many of which would otherwise be nauseating on account of odor or taste, are thoroughly disguised without depriving them of their medicinal value in the slightest.

Claim for Compressed Tablets, Tablet Triturates and Hypodermic Tablets, ready solubility and quick therapeutic results. These preparations are made in accordance with certain well-defined rules, whereby the precise quantity of medicament they are said to contain may be depended upon in each administration, the medicinal agent being universally distributed throughout the whole mass. To recapitulate, they are quickly and entirely soluble. They are permanent in form and accurate in dosage. They are safe and rapid in action.

Claim for Pharmaceutical Specialties, a general elegance, unsurpassed and a medicinal activity unabridged as relating to the various forms of medicines indicated for the several diseases for which they are intended to be administered.

As an attestation of these claims, they quote the fact that they have received not less than 16 highest medals from as many different World's Expositions which have been held, dating from the year 1873 to the present time and further than that they have received hundreds of testimonials from the jurors who have passed upon their products in local Expositions both at home and abroad. Incidental to this might be mentioned, the award of a Silver Medal by the International Medical Congress held at Rome, Italy, their last triumph more of a local nature, a Silver Medal and special mention by the National Export Exposition held at Philadelphia, 1899, and which they believe was the highest and only award for the particular articles referred to.

A Gold Medal awarded at the Sydney World's Fair and an honorary membership bestowed by the Pharmaceutical Society of New South Wales, and 70 medals and diplomas awarded at various exhibits, including the above. This is the triumph of 40 years' experience in Pharmaceutical Chemistry.

INGLUVIN.

The Natural Glycocholic Acid in Ingluvin is the active principle and the most efficient agent in the treatment of all stomachic and enteric disorders.

SYP. HYPOPHOS. CO., FELLOWS

CONTAINS

The Essential Elements of the Animal Organization—
Potash and Lime ;

The Oxidizing Elements—Iron and Manganese ;

The Tonics—Quinine and Strychnine ;

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THE CANADA LANCET

VOL. XXXIV.

TORONTO, APRIL, 1901.

No. 7.

ORIGINAL ARTICLES.

NOTES ON HYDROCHLORIC SUPERACIDITY, WITH REPORTS OF CASES.

BY GRAHAM CHAMBERS, B.A., M.B.

Physician to St. Michael's Hospital; Assistant Physician to Toronto General Hospital.

According to my experience excess of hydrochloric acid is a very common functional sign in cases of gastric indigestion. This acid is no doubt the secretion of the border or oxyntic cells of the peptic glands. The size of these cells varies with their activity. When quiescent they are smaller than when their secretory function is active. In cases of hydrochloric hyperacidity, where the secretory function of these glands has been morbidly active for a prolonged period, proliferation of both the border and chief cells can be frequently demonstrated in some parts of the mucous membrane of the stomach. This fact should be kept in mind, as the greater the proliferation of the glandular elements the more difficulty will be experienced in affecting a cure.

As stated above, hydrochloric superacidity is a common result in analyses of gastric contents. It may be present in hyperchlorhydria, hypersthenic gastritis, hypersecretion, ulcer, carcinoma, gastropotosis, atony, as well as in some of the neuroses other than those mentioned in the foregoing list of diseases. It is quite evident therefore that this functional sign alone is of little value in differentiating the above diseases. But it is a sign that must be considered in the treatment of every one of them.

Let us now consider the etiology of excess of hydrochloric acid. As far as known at the present date, the causative agents may be conveniently described under two heads:—

- (a) Local irritation.
- (b) Mental disturbances.

However, in many cases both of these conditions are important factors in the development of the morbid condition.

The stomach may be over-stimulated in several ways. Stagnation of food may affect it. I ascribe the hyperacidity which is frequently found in gastropotosis and atony to this cause. Again, too rapid eating may bring about the same result. The stomach is not a gizzard and

should receive the food in a thoroughly masticated condition. If, in place of this, the food is gulped, then excessive stimulation of the glands of the stomach must necessarily follow.

Hyperacidity is also a frequent result of eating excessively of foods which are known to markedly stimulate the secretion of hydrochloric acid. Acid, meats, salt, fruits, pickles, spices, spirits, sugars and coarse vegetables are believed to be the most potent in this particular, whereas bread, milk, well-cooked cereals, tender vegetables, etc., are only mild stimulants. That meat is an active stimulant of secretion of hydrochloric acid is supported by the fact that the gastric juice of carnivorous animals is always highly acid and that the glandular elements of their stomachs are always very highly developed. Fruit is also apt to cause excessive secretion. I believe that more cases of hydrochloric superacidity are due to uncooked fruit than to any other form of food.

Mental and moral causes also take an important part in the development of many cases of this condition. I have met several cases in which the commencement of the trouble appeared to date from a disappointment, excessive mental work, etc.

The symptoms of hydrochloric superacidity will vary with the disease of which the excess of acid is only a functional sign. Nevertheless there are certain symptoms which are usually present, and of these pain half an hour to three hours after eating, relieved by eating, or by an antacid, is the one which is most frequently complained of. The reason why the pain appears at this time is readily understood. As soon as food is taken in the stomach hydrochloric acid begins to be secreted, but it is immediately fixed by the proteids of the food, forming an acid albumen. As soon as all proteids are satisfied then the acid remains free in the stomach. This usually happens about three-quarters of an hour after eating an average-sized meal. In cases of hyperacidity the acid is secreted more rapidly than normal and as a result free hydrochloric acid appears earlier during digestion. As soon as the acid accumulates above a normal proportion it is apt to cause pain by irritating the mucous membrane of the stomach. When albuminous food or an antacid is taken the acid becomes fixed and the pain is for a time relieved.

The treatment of hyperacidity will depend to a certain extent upon the disease in which it occurs as a sign. Thus the treatment of ulcer would be quite different from that of the neurosis, hyperchlorhydria. Nevertheless there are certain general rules which one should follow in all cases of excessive secretion, and it is to these alone I wish to refer in these notes. The diet should always be of a bland, unirritating nature. Some advise the use of meats alone in cases of hyperacidity. They maintain that the albuminous food will fix the free hydrochloric acid and thus prevent it irritating the stomach. But we know that meat is a most potent agent in stimulating the secretion of hydrochloric acid and thus would be detrimental in affecting a cure. About three years ago I frequently used a meat diet in the treatment of this condition, and I found that it was unsuccessful in many cases. A mixed diet of very tender meats, milk, bread, butter, cereals, etc., appears to me to be more rational. This form of diet fixes the free acid and at the same time will not stimulate the secretion of hydrochloric

acid to the same extent that a meat diet will. Fruit, pickles, coarse vegetables, sugars, and spirits should not as a rule be allowed.

The medicinal treatment is more or less alike in all cases of hyperacidity. Ext. belladonae, ext. cannabis indicae, bismuth carbonat, ext. cocae, are all useful sedatives to the mucous membrane of the stomach. Taka diastase may be used with advantage in many cases as it assists in the digestion of starchy foods. Sodium bicarbonate and calcined magnesia are generally required to neutralize the excess of acid. Strychnine and hydrastine are the drugs to be depended upon in cases of atony. Conheim, of Berlin, recommends the administration of olive oil in cases of spasm and obstruction of pylorus. I have used it in two cases with apparent advantage in chronic ulceration with symptoms of pyloric obstruction. Bitters, acids, pepsine and irritating cathartics are contraindicated.

CASE 1, HYPERCHLORHYDRIA.—A. T., aged 22, female, single, consulted me in August, 1900, on account of pain after eating. She stated that she had suffered for three weeks, and previous to that date had always good health. She had always been very regular with her meals and as a rule had eaten plain food. She was very fond of fruit and had eaten freely of it during the summer months. The pain for which she sought advice began about an hour after eating and lasted as a rule from one to four hours. Occasionally the pain would continue to the following meal, when it would be relieved for a time. She stated that baking soda would always relieve it for a short time. Her appetite was good and her bowels were constipated. She did not complain of belching, heartburn, flatulency, nausea or vomiting. I gave her a test breakfast and analysed the gastric contents with the following result: quantity, one ounce; mucus, about normal; total free HCl, 34; total acidity, 78. Lugol's solution gave marked violet color.

The position of the stomach was found to be normal.

DIAGNOSIS:—Hyperchlorhydria.

TREATMENT:—Diet: white bread, butter, milk, strained gruels, well cooked cereals, scraped meat, tender meats. Fruits, pickles, coarse vegetables were strictly prohibited.

Medicinal treatment consisted in the administration of a large dose of bismuth subnitrate every morning, a capsule containing ext. belladonae, ext. cannabis indicae, ext. cocae and taka diastase during each meal, and two teaspoonfuls of calcined magnesia an hour after each meal. The bowels were regulated by solid ext. cascara.

Under this treatment she rapidly improved, and in a fortnight was able to digest an ordinary meal without discomfort.

In this case it was quite clear that the excessive secretion was due to increased functional activity of glands, and that there was probably no proliferation of the glandular elements.

CASE 2, GASTROPTOSIS WITH HYDROCHLORIC SUPERACIDITY.—Mrs. K., aged 35, mother of one child, consulted me on Feb. 1st, 1900, on account of pain after eating, and weakness. Her health had been poor for about eight years. She had been treated for prolapse of the uterus, inflammation of the ovaries, and haemorrhoids. About the beginning of this

year she began to suffer from pain after eating. The pain would usually come on about 4 p.m., and would continue until she ate her tea, when it would be relieved for about two hours. It would then commence again and continue until midnight. The pain was very severe at times. There was neither nausea nor vomiting, but if she could make herself vomit the pain would stop. The patient also complained of flatulency, belching, heartburn and constipation. The tongue was slightly furred. The appetite was fair.

I gave her a test breakfast and analyzed the gastric contents with results as follows: quantity expressed, three ounces; mucus about normal; total free HCl, 42; total acidity, 78.

On inflating the stomach with air the lesser curvature was found to be lower than normal, and the greater curvature passed across the abdomen about two inches below the umbilicus.

TREATMENT:—Abdominal bandage; bland diet, such as recommended in hyperchlorhydria, to be taken in three meals a day as far apart as possible; a mixture of bismuth carb., tinct. belladonae, tinct. nux. vom. and arom. fl. ext. cascara sagrad. before meals.

Under this treatment the patient rapidly improved and at the present date is quite free from pain after meals.

In this case I believe that the hyperacidity was due to the stagnation of food. The application of the bandage was no doubt the principal factor in affecting a cure.

CASE 3. Ulcer of Stomach preceded by symptoms which usually indicate hyperacidity.—M. C., aged 24, female, patient of Dr. Geo. Balmer, Toronto. I saw her in consultation on Feb. 1st, 1901. Patient had measles in childhood, otherwise had good health until she was 14 years of age. During the following year she began to eat cloves, and suffered a good deal of pain in the stomach while doing so. After two months the pain became so severe that she gave up the habit, and her stomach gave her no further trouble for some years.

At the age of 19 years she began to suffer from hiccoughs and eructations of gas, which would come on about an hour after eating, and last as a rule about half an hour. These symptoms continued for about two years, when she began to have pain in the region of the stomach after eating. The pain would usually come on about an hour after eating and continue an hour. It would frequently radiate to the left shoulder. The pain was always worse after eating salt pork, tough beef, pickles, onions, etc. She did not suffer nearly so much after eating farinaceous foods such as bread, porridge, etc. She did not vomit until Jan., 1900. During that month she was travelling to Winnipeg and vomited and retched for five days. Since then she had no further vomiting until hemorrhage took place on Jan. 26th, 1901, but she suffered more or less from pain after eating.

On Jan. 23rd, 1901, the epigastric pain became much more severe, and on the 26th Jan. she vomited blood. The hemorrhage recurred on the 29th Jan. and again on the 2nd Feb. Since the last hemorrhage the patient has gradually improved.

TREATMENT.—Dr. Balmer saw the patient for the first time on Jan. 26th, and ordered her a hypodermic of morphine sulphate, a mixture of

bismuth subnitrate and codeine phosphate, an icebag to be applied to the epigastrium, and to be nourished by nutrient enemata. After the hemorrhage on the 29th Jan. the bismuth mixture was discontinued and when the haematemesis again recurred on 2nd Feb. everything was withheld from the stomach. This form of treatment was continued for one week when she was allowed a teaspoonful of peptonized milk every two hours by the mouth. The food—peptonized milk, Wemalta and Allenbury's No. 3—by the mouth was gradually increased and a corresponding decrease was made in the nutrient enemata and finally all the nourishment was given by the mouth on Feb. 20th. The patient has at present (March 1st) no gastric distress and only slight eructations of gas.

Gastric ulcer is usually complicated by hyperacidity. In this case the hyperacidity appeared to have preceded the ulcer, but in many cases no such history is obtained.

CASE 4.—J. J., aged 23, consulted me on Feb. 11th, 1901, on account of heaviness and pain after eating, headache, and general lassitude. Family history negative. Patient had good health until 20 years of age, when he suffered for six months from the same symptoms on account of which he now sought advice. He recovered from this attack and had good health until last summer, when he began again to suffer from the same symptoms. The subjective symptoms are flatulency, heaviness after eating, headache, constipation, and occasionally pain after eating. The symptoms are always more marked after a large meal. The headache was always more marked after a large meal or after eating fruit. The appetite was good.

Analysis of the gastric contents after a test breakfast gave the following result:—Quantity 4 ounces; mucus normal; total free HCl 32; total acidity, 70.

The stomach was distended with air and found to be dilated. The water test showed diminished motility, and the splashing sound was readily made out beyond the normal limits.

DIAGNOSIS.—Atonic dilatation with hydrochloric superacidity.

TREATMENT.—A capsule containing *ext. nux. vom.*, *ext. belladonae.*, *ext. cascara sag.* and resorcin before each meal and a bland concentrated diet. The meals were to be taken as far apart as possible. The patient found that he was able to digest his food best when he ate a very light lunch.

Under this treatment the distress after eating quickly disappeared, but he still occasionally suffers from the pain in the head.

LATENT APPENDICITIS *

By J. A. GRANT, Jr., M.D.

St. Luke's Hospital, Ottawa.

I wish to use the title of my paper in a restricted as well as in its fullest sense, that is inferring from the clinical data there is a latency of the absolute conditions present; a grave condition, impossible of diagnosis, as well as an absolutely latent appendicitis, which may be diagnosed only after operation. Not only may the attack be latent, the symptoms of such slight nature that a physician is not consulted, nor even has the patient any symptoms referable to the appendix, but also the gravity of the condition may be latent, the symptoms so slight that many a man would be inclined to treat the case medicinally and await developments, thus greatly reducing the patient's chance of recovery.

Case I.—I was called to see M. S., a young girl aged 11, suffering from severe pains in the right iliac region. The patient has had the usual diseases of childhood, and with the exception of these has always enjoyed good health. She had suffered at times from colicky pains in the intestines, but has never had to lay up or leave school. On the morning of May 24th she was suddenly seized with pain over the appendix, accompanied by vomiting. I removed her to the hospital at once, and on admission found her temperature at 100, pulse, 90, marked tenderness over the region of the appendix; no dulness, but considerable rigidity of the abdominal wall. As the symptoms became more aggravated, I operated the following morning. On examination numerous firm old adhesions were found in the neighborhood of the appendix, binding the caecum firmly to the abdominal walls in many directions. These adhesions were broken down after considerable difficulty, and on bringing the appendix to the surface, it was found acutely inflamed and covered with recent lymph. It was removed and the patient made an uneventful recovery. The fact that this was the first attack that the patient had had to her knowledge, coupled with the presence of numerous old firm adhesions matting the appendix, caecum, and abdominal wall together, shows that there must have been repeated attacks of inflammation in the neighborhood of the appendix that had not caused sufficient symptoms to interfere with the ordinary routine of her life.

Case II.—A. S., aged 26, was admitted June 10th, 1900. Patient was seized three days ago with pain in the right iliac region, and stated he had never had a previous attack. On admission to hospital there was distinct dulness over McBurney's point, nausea, temperature 100, pulse 84. He had had a good night, slight pains at times; slept about five hours. Next morning his temperature was 100, pulse 78, pain very slight, dulness, no nausea or vomiting. He was removed to the operating room, and on making an incision I found the appendix twisted on itself, rup-

*Read before the Medical Society of Ottawa, Feb, 1901.

tured at the angle and gangrenous. Many adhesions were present, binding the appendix to the surrounding tissues. The caecal wall in the neighborhood of the adhesions was highly inflamed and almost purple in colour; considerable pus was present. The appendix was removed, parts dusted with iodoform, and a large iodoform gauze drain packed around the caecum. Patient was discharged July 5th, having quite recovered. In this case the illness dated from three days previously, the pain was localized, but not severe, and even intermittent. There was no vomiting, but simply a feeling of nausea. The temperature, while under observation, was only a fraction over 100, and the pulse ranging between 78 and 90. There was distinct dullness over the appendix. Thus the slightness of the symptoms, and short duration of the attack, would hardly lead one to expect to find such a grave condition of affairs, a gangrenous appendix, perforated, and a caecal wall acutely inflamed.

Case III.—Mr. T., aged 29, was admitted to hospital, June 12th, suffering from pain in the iliac region. For some years he had been subject to similar attacks of pain, which passed away in a few days under household measures. The present attack failed to do so, and for the first time a doctor was called in. Two days before he was suddenly seized with pain and severe vomiting, since which time the pain had been constant. On admission to hospital he had a temperature of 102, pulse 98, complaining of weakness and nausea, but no pain. The following day his temperature was 98 3-5, pulse 76, occasionally attempts at vomiting, pain and tenderness in the right iliac region, and some slight distention of the abdomen. At 12 o'clock that day, 3rd, he was operated on, and on opening the abdomen, commencing general peritonitis was found, pus having oozed through the peritoneum as soon as it was incised. There were numerous recent adhesions and some old ones in the region of the appendix. The appendix itself was gangrenous and the colon in its neighborhood was fast becoming so. The appendix was removed, parts carefully dried and dusted with iodoform, iodoform gauze packed freely around the stump, and a large gauze drainage left in the wound. The patient, contrary to my expectation, made an uneventful recovery, and was discharged cured 23 days afterwards. This case was more serious in its aspect, but certainly the man's condition would hardly have led one to suspect general peritonitis and a gangrenous appendix.

Case IV.—Mrs. B., aged 24, had several slight attacks of appendicitis which always yielded to hot fomentations. The present attack began Monday, December 12th, with acute pain over the appendix, tenderness and vomiting. On the 14th she was removed to hospital, and on admission her temperature was 99 2-5, pulse, 100, nausea was present and she had tenderness over the appendix. I operated that day, and found numerous adhesions, the appendix almost gangrenous, distended with pus, and on examining it later it was found that it was on the point of rupturing.

Case V.—Miss E., aged 24, had always enjoyed good health up to one year ago, when she had her first attack of appendicitis. Three months later she had her second. Both attacks were slight. Since then she has been almost an invalid, unable to stand exertion, more or less abdominal

pain present, intestinal indigestion, abdominal fulness and distress, bowels very irregular, general debility and indisposition to work. These symptoms kept on until July last, and, as she was rapidly losing ground, I removed her to hospital. Her temperature on admission was 99, pulse 88, there was slight tenderness and pain over the appendix, which on operation was found to be markedly congested and distended with fluid and adherent to the colon. On removal it was found that a stricture was present at its proximal end, and the appendix was filled with a purulent looking material. Recovery was uneventful. There is no doubt that her impoverished condition during the preceding six months was due to the absorption of faecal toxins from the appendix, as having had her under observation ever since the operation in July last her condition has been one of perfect health, never having felt better in her life. The case was rather chronic, but the symptoms up to the time of the operation were very indefinite, and it was only the fact of former attacks having occurred made me decide to operate, and the operation proved that the constant absorption of the poisonous contents of the appendix was fast undermining her health, and might at any time have assumed an acute aspect.

Case VI.—S. McF., aged 25, was admitted to hospital January 21st, complaining of pain in the right iliac region. Two days ago she was suddenly seized with a sharp pain in the epigastric region, which lasted till the following day. There were periods of relief, lasting about an hour or more. On the second day the pain shifted to the right iliac region, and has been continuous in character. She vomited four times on the second day of the attack. No history of former attack. On admission January 21st, her temperature was 100, pulse 94. She complained of pain in the right iliac region, some tenderness, well marked dulness, no rigidity or tympanites. She was kept under observation for 36 hours, during which time there was no material change in her condition, the marked dulness being the most characteristic condition found. There had been no vomiting since her admission, her temperature had fallen to normal, her pulse 80, but marked dulness, some tenderness, and pain over McBurney's point. On examination in the region of the appendix, the finger detected a large mass apparently the size of an egg, and on bringing this to view the appendix was found pointing backwards, and the base for one-quarter of its length apparently healthy: the outer three-fourths of the appendix was imbedded in a large mass of inflammatory material, binding it firmly to the posterior surface of the caecum; the whole mass was almost purple in colour, and felt as if there might be some pus towards the centre of this rapidly becoming necrotic mass. On breaking down the adhesions, which were so firm as to require ligature in several places, it was found that pus had not yet formed, nor had the appendix ruptured. The remaining adhesions were tied, the appendix liberated and removed. From the amount of inflammatory exudation and its deep purple colour there is little doubt that this mass would have suppurated or become gangrenous in a short time. My first intention was simply to free any pus that was present, clean out the abscess cavity, and treat the case by drainage. Having entered the mass and

found no pus, and having disturbed the adhesions considerably, I thought it wise to remove the offending member, although the appendix was still buried in inflammatory exudation. By ligaturing this mass in sections, the appendix was liberated and removed with very slight hemorrhage. Considering this was a first attack, and only dated since the Saturday previous, five days, no vomiting, temperature normal, pulse 80, and only marked dulness with some pain, one would scarcely expect to find such a large mass of firm vascular inflammatory exudation well advanced towards gangrene.

Mansell Moullin in a paper on "Early Operation on Appendicitis" read before the Harveian Society of London last October, stated that of the symptoms by which cases which would recover of themselves might be distinguished from those that would require operation, the pulse was the most reliable guide. If at the end of 36 hours, while the patient was lying in bed, it was over a hundred a minute, or if in the course of the last few hours it had increased much in frequency, there was no doubt that the attack was a severe one, and that operation would be required. The temperature was no certain guide unless it continued to rise. The intensity of the pain was of great significance, and so were also, but perhaps in less degree, local tenderness, muscular resistance, and a sense of fulness in the right iliac fossæ. Vomiting, constipation and other symptoms usually present could not be relied upon in the same measure. Great stress was laid upon the absence of any individual symptom being of no account, and that operations should be performed in any case in which the pulse was very rapid, even if other symptoms did not point to any great degree of intensity. Here, there is an attempt to estimate the importance of individual symptoms, but so far it must be acknowledged that we are unable to tell with any great degree of certainty what is the actual condition of affairs present. I have purposely given notes of some of my cases where the condition of affairs was much more severe than the clinical symptoms have indicated. It is our goal to be able to diagnose accurately the pathological conditions present, and to estimate the importance of each individual symptom, or rather the importance of the individual symptoms present, as we so often find so many cardinal symptoms absent. It is this very fact of the latency of the conditions present which has such great bearing on the question of operation. Moreover, very rapid pathological changes are liable to take place in any case and at any time, so that no one can state in any given case, no matter how simple to-day, what the conditions will be to-morrow. Our inability to estimate individual symptoms, the grave latent conditions, associated with apparently innocent clinical symptoms, the rapid changes that are liable to take place for the worse in any case, our improved operative technique and aseptic surroundings, together with the percentage of recoveries that we can boast of, all have an important bearing on the future treatment of this disease, and lead me to think that appendicitis is a surgical disease, and the time to operate is as soon as the condition is diagnosed.

RADICAL CURE OF LARGE UMBILICAL HERNIA

By DR. W. J. HUNTER EMORY.

Surgeon to Grace Hospital, Toronto.

On the 18th day of January, 1898, Mrs. C. was admitted to Grace Hospital, seeking relief from a very painful condition caused by extensive ulceration in the skin and subcutaneous tissues, covering a large umbilical hernia of long standing. Patient fifty years of age. First noticed protrusion twenty years before. Nine years before, when hernial protrusion was the size of a large orange, she stated that she had consulted Dr. Bull, of New York, who advised against operative interference on the grounds that the extreme corpulency of the patient would render an operation not only very hazardous, but unlikely to result in permanent success. The photograph accompanying was taken just before the operation, after the patient had been three weeks in bed on a restricted diet, with active catharsis, which had reduced the size of the hernial protrusion by at least one half. When first admitted the coverings of the hernia were tense, with numerous ulcers over the surface varying from the size of a pea to that of a half dollar, due to pressure. These healed readily under treatment, and on the 27th day of January the following operation was performed for the radical cure of the hernia, assisted by Dr. G. P. Sylvester.



Hand Grasping Hernia.

An incision was made over the central portion of the mass, opening peritoneal covering. The omentum was found densely adherent to the peritoneum throughout the entire surface, and was separated with great difficulty, being also intimately adherent to the intestines, colon, and stomach, as well as to the parietal peritoneum. When the omentum was

completely separated, a large mass of it, being ragged and torn, was ligatured in sections with catgut, and excised. The adhesions between the various coils of the jejunum, about ten feet of which occupied the hernial sac, and the transverse colon, the major portion of which also occupied the hernial sac, and the stomach, which was entirely protruded through the hernial ring, were gradually separated with great difficulty, and the hernial opening had to be enlarged before the stomach could be returned to the abdominal cavity. When all the contents had been returned to the abdominal cavity the entire hernial sac was excised, including the peritoneal sac and the integumentary structures forming the covering. The peritoneum was then closed by continuous catgut suture; the fibrous structures which unite to form the "linea alba," were firmly united by mattress sutures of silver wire, the remaining layers being closed separately by continuous catgut sutures.

The patient suffered considerably from symptoms of shock during the first few hours, but by the end of twelve hours had reacted nicely, and the convalescence was normal up to the fifth day, when, from some cause, suppuration occurred in the abdominal wound. This, however, was not to be wondered at, considering the very great amount of adipose tissue present. The suppurative process continued for about ten days—the wound eventually healing, and a very firm cicatrix resulting, and at the date of writing no recurrence has taken place, though over three years have intervened.

SELECTED ARTICLES.

FACTS ABOUT SMALL-POX AND VACCINATION.

Issued by the Council of the British Medical Association, January 19th, 1898.

1 The Mortality from small-pox is much less now than in prevaccination times.

Bernoulli, the famous mathematician, calculated that no fewer than 15,000,000 of human beings in the last century died of it every 25 years. Stüssmilch, an eminent statistician of the time of Frederick I, estimated that nearly everyone had small-pox, and that it carried off a twelfth part of mankind. In London in 1660-79, of every 80,000 deaths, 4,170 were from small-pox. In Iceland in 1707-9, it killed 18,000 persons in a population of 50,000. In Glasgow, a large and very insanitary town, in 1783-1800, of 31,088, deaths or burials from all causes, 5,959 were due to small-pox. Chester, which on the other hand was described by an eminent authority of the time as a town of "almost incredible" healthiness, had fewer than 15,000 inhabitants and contained in the year 1775 only 1,060 persons, or one in 14, who had not had small-pox. In Kilmarnock, with 4,000 or 5,000 inhabitants in 1728-64, of every 1,000 children born alive 161 died of small-pox. In the village of Ware, in Hertfordshire, after an epidemic in 1722, only 302 persons in a population of 2,515 had never had the small-pox. Such examples could easily be added to. Great diminution of small-pox mortality occurred after the introduction of vaccination where small-pox inoculation never prevailed, and also in places where small-pox inoculation had prevailed.

2. The greatest diminution in the small-pox mortality is found in the early years of life, in which there is most vaccination

In Geneva in the period 1580-1760, during which there were 25,349 small-pox deaths, 961 of every 1,000 were under 10 years of age. In Kilmarnock in 1728-64, of every 1,000 small-pox deaths, 988 were under 10 years of age. In a total of 36,755 deaths from small-pox at all ages occurring in Kilmarnock, Edinburgh, Manchester, Warrington, Chester, Geneva, and the Hague in various prevaccination periods from 1580 onwards, 17,252 were under 2 years of age. In the present day, on the other hand, vaccination being performed in infancy and having its greatest protective influence in the earlier years of life, small-pox has to a great extent departed from children and transferred itself to later and less protected ages. In London in 1884, of 1,000 small-pox deaths, only 343 were under ten years old. But this calculation includes both vaccinated and unvaccinated persons. In the vaccinated community the corresponding figures were not 343, but 86; and in the unvaccinated, not 343, but 312. Among the unvaccinated the 612 is better than the Geneva

961, and the Kilmarnock 988 of prevaccination times. Vaccination, by lessening the opportunities for infection, and increasing the intervals between epidemics, has helped even the unvaccinated. Yet among the unvaccinated in London, Leicester, Dewsbury, and Gloucester, small-pox is still to a great extent a disease of childhood.

In prevaccination times, small-pox, measles and whooping cough were diseases of childhood. Measles and whooping cough are still diseases of childhood, but small-pox, and especially fatal small-pox, has been to a very remarkable extent driven from vaccinated childhood by means of vaccination. In the same way, what still remains of it can be driven from later periods of life by means of revaccination.

The manner in which small-pox differentiates between the vaccinated and unvaccinated is seen in the incidence of the disease in towns where it has recently prevailed. In Gloucester, for example, there had been extreme neglect of infantile vaccination, and the disease attacked a school and spread there, the scholars being children. In Leicester the infection was accidentally introduced into the scarlet fever hospital and the children being unvaccinated the disease began to spread there. The hospital was then emptied of scarlet fever and no more cases were admitted, and in the town of Leicester scarlet fever cases increased to thousands. In Warrington on the other hand, infantile vaccination had been well carried out, but there was a want of adult revaccination and the disease fastened on the workmen in a large ironworks. Then the workmen's committee in charge of the sick fund resolved "that any member who remains unrevaccinated after Monday, November 2nd, 1892, shall not be entitled to any sick benefit should he be afflicted with small-pox;" and in consequence over 1,400 men were revaccinated by the works' doctor, and many others privately. The result was that after the middle of December there were only 12 cases among the employees, and the health officer of Warrington reported that these were among men who had refused revaccination or joined the works subsequently.

The following table teaches a lesson that cannot easily be misread.

Percentage of total small-pox deaths borne by children under 10 years of age in recent outbreaks.

	Vaccination Default in antecedent years.	Percentage of total small-pox deaths borne by children under 10 years of age.
Warrington	.....Very slight.....	22.5
Sheffield	.....Very slight.....	25.6
London	.....In 1883-91, 10 per cent.	36.8
Dewsbury	.....In 1882-92, 32.3 per cent.	51.8
Gloucester	.....In 1885-94, 10.6 to 85.1 per cent.	64.5
Leicester	.....In 1883-92, 43.8 to 80.1 per cent.	71.4*

*Or 66.6. The difference depends on the exclusion or inclusion of three deaths which occurred owing to the attack of several children in a scarlet fever ward through proximity to the small-pox hospital.

3. In countries where there is much vaccination and re-vaccination relative to the population, there is little small-pox.

In Prussia both vaccination and revaccination are compulsory, and small-pox mortality is almost abolished.* Beginning with the year 1816, it is found that in that country previous to the law of 1874 the small-pox death-rate was 309 per annum per million of population. Since then, ending with 1892, it has been 15, and in the last ten years of the period only 7. Moreover, the compulsory vaccination age is the second year of life, and investigation showed that in 1886-90 more than two-fifths of the few deaths that occurred from small-pox were under two years of age. In Austria where vaccination is not compulsory, the rate instead of being 7 per million as in Prussia, was 458 in the same period. In Belgium also vaccination is not compulsory, and in 1875-84 it had a rate of 441 per million as compared with Prussia's 22 in the same period. In Italy since 1888 vaccination of infants has been compulsory, as has revaccination of children attending *public* schools. Already a great improvement is indicated. In 1881-90 the small-pox death rate was 355 per million per annum, and in 1891-94 it was only 65. At the time of the European epidemic of 1870-75 Scotland, England, Sweden and Bavaria had a compulsory vaccination law, and their small-pox rates per million in the worst years were 1,470, 1,830, 1,660 and 1,660 respectively. Prussia, Holland and Austria had no general compulsory vaccination, and their rates in the worst years were 5,060, 5,490, and 6,180. Coming to 1877-86, with vaccination not compulsory in Austria, with only infantile vaccination compulsory in England, and with vaccination and revaccination compulsory in Prussia, the average death rate per million from small-pox in the capitals of these three countries was in Vienna 670, in London 250, and in Berlin 10. In London the rate would have been less but for the disease spreading from the small-pox hospitals that it then contained.

4. In classes among which there is much vaccination and re-vaccination there is little small-pox.

In epidemics, as in London, Sheffield, and Warrington, re-vaccinated postman and policemen remained safe in the midst of exposure to infection. Sir Charles Dilke stated in 1883 that the average strength of the permanent postal service in London was 10,504 in 1870-80, and yet during all that period, including the great epidemic, there was not a single death from small pox, and only ten slight cases. In 1891-94, the employees of the General Post Office were over 55,000, yet there was only 17 cases of small-pox and one death, though postmen owing to the nature of their duties are specially exposed to infection.

In the Army and Navy, where a large majority of the men are successfully revaccinated, there is very little small-pox—very much less than before revaccination become so prevalent.

No persons are so terribly exposed to infectious diseases as are the nurses in fever and small-pox hospitals. As regards fever nurses, Dr.

*As regards the Prussian vaccination laws see BRIT. MED. JOUR., 1894, vol. ii, p. 1213 and Dr. Edwards in *The Practitioner* of May, 1896

Collie, Medical Superintendent of Homerton Hospital, declared that "the only way in which nurses become seasoned against fever is by taking the disease." At Homerton, Stockwell, and Liverpool Road Fever Hospitals, in the ten years ending 1881, 133 of the staff were attacked by various fevers, and 25 died. The Gateshead Medical Officer wrote: "Every nurse who has been more than a fortnight in the typhus wards has suffered from typhus." In Newcastle in 1882 only 5 out of 14 nurses escaped typhus, and among the 9 attacks there were two deaths. In the Hospitals of the Metropolitan Asylums Board in 1887-95, no fewer than 704 of the attendants contracted scarlet fever, diphtheria, or enteric fever.

How is it as regards small-pox? At Homerton Hospital in 1871-77 366 persons were employed. All but one was revaccinated and she was the only one who took small-pox. In the Highgate Hospital the Royal Commission found that since May, 1883, of 137 nurses and attendants 30 had had small-pox before entering the service. Of the other 107 all except the gardener were revaccinated, and the gardener was the only one who took small-pox. In the Sheffield hospitals, in the year ending 31st March, 1888, there were treated 1,798 small-pox patients. The total number of attendants, etc., was 161. Of these 18 had had small-pox previously and escaped attack; 63 had been vaccinated in infancy, of whom six were attacked and one died; the other 80 were successfully revaccinated, and not one contracted small-pox. In Leicester, however, where vaccination is neglected, some of the nurses refused revaccination. In the outbreak there the total hospital staff consisted of 40 persons. Of these 14 had either had small-pox or had been revaccinated before the outbreak, and 20 were vaccinated owing to the outbreak. Among these 34 (14 and 20) one mild case occurred in a nurse whose revaccination was ten years old. Six of the 40 nurses appear to have been imbued with anti-vaccination opinions, and refused revaccination. Only one of the six now needs any protection against small-pox. Five of them took it and one died.

5. In places where small-pox prevails it attacks a much greater proportion of the unvaccinated than of the vaccinated, especially where the vaccinations are comparatively recent.

In the Homerton Small-pox Hospital in over 10,000 cases treated by Dr. Gayton nearly 21 per cent. were unvaccinated, and among children under 10 the unvaccinated were no less than 47.6 per cent. The unvaccinated at this time (1873-84) in the population from which the cases were drawn did not amount nearly to 21 per cent. much less to 47 per cent. On the other hand, there is one hospital (Highgate) which does not admit children under seven and which draws its patients from a more universally vaccinated section of the population, and this hospital differed from others in London in that the percentage of unvaccinated patients was found to be much less, the difference being due to the difference in the ages of admitted cases, and the difference in the prevalence of vaccination in the population from which cases came.

6. In houses invaded by small-pox in the course of an out-break not nearly so many of the vaccinated inmates are attacked as of the unvaccinated in proportion to their numbers.

Taking children under 10 years old, in infected houses in Dewsbury, 10.2 per cent. of the vaccinated were attacked, and 50.8 per cent. of the unvaccinated; in Leicester, 2.5 per cent. of the vaccinated, and 35 per cent. of the unvaccinated; in Gloucester 8.8 per cent. of the vaccinated, and 46.3 per cent. of the unvaccinated. These places are selected here because they are centres of antivaccination, as to which it cannot be truthfully alleged that the unvaccinated are weakly children whose vaccination has been postponed by medical certificate, or that the vaccinated and unvaccinated children belong to different classes especially when they are compared in the households actually invaded by the disease. It is urged by antivaccinationists that vaccination does not protect against small-pox, but on the contrary tends to weaken the system against all disease. Yet the vaccinated were attacked in much less proportion than the unvaccinated.

7. The fatality rate among persons attacked by smallpox is much greater, age for age, among the unvaccinated than among vaccinated

Taking the 10,403 cases treated in Homerton Hospital in 1873-84, the deaths among the vaccinated 8,234 were 869, or 10.5 per cent., and among the unvaccinated 2,169, were 938, or 43.4 per cent. We shall see shortly that the deaths among the well vaccinated were only 3 per cent. Taking the epidemics in three towns, Dewsbury, Leicester and Gloucester, where vaccination has been neglected, we find that under 10 years of age, among 72 vaccinated children attacked, two died, or 2.7 per cent., but among 961 unvaccinated children attacked 350 died, or 37.3 per cent. Taking persons over 10 years old, among 1,959 vaccinated persons attacked, there were 136 deaths or 6.9 per cent., and among 331 unvaccinated persons there were 75 deaths, or 22.6 per cent. Again it is to be noted that as vaccination was practically optional in these towns, the unvaccinated children, according to anti-vaccination theories, should have been more able to resist death by smallpox than those who had been subjected to an operation which is alleged to weaken the system and render it more liable to disease and death.

8. It cannot be truthfully alleged that independently of vaccination smallpox is a milder disease now than in former centuries.

If it were the case, as is sometimes argued by anti-vaccinationists, that the smallpox fatality rate in last century was about 18 per cent.* of persons attacked, then the much higher rate now occurring among the un-vaccinated would show the disease to be much more severe now than then. But in the last century, as in the present century, the fatality varied greatly in different outbreaks, as does the fatality of scarlet fever,

* This rate is based mainly on a prevalence of the disease in certain towns in the West Riding of Yorkshire in certain years between 1720 and 1730, but no average, either for a century or for a country can be calculated on such limited data. (*Vaccination Vindicated*, pp. 57-59.)

diphtheria, measles, etc., in the present century. And in epidemics in the present century, whether they be mild or severe, whether the fatalities be few or many, and whether there be much or little vaccination in the community, it is found that both the attack rate and the fatality rate are much greater in the unvaccinated than in the vaccinated in proportion to their numbers.

9. The degree of protection conferred by vaccination corresponds to the thoroughness with which the operation has been performed, three or four marks being much better than one or two, and a large mark much better than a small one.

In Dr. Gayton's 10,403 cases at the Homerton Hospital, 2,085 had good marks, and the fatality rate was 3 per cent.; 4,854 had indifferent marks, and the fatality rate was 9 per cent.; 1,295 were alleged to be vaccinated, but had no marks, and the fatality rate was 27 per cent.; and 2,169 were unvaccinated and the fatality rate was 43 per cent. Taking "good" marks only, and attending to their numbers, Dr. Gayton found that with one mark the fatality rate was 4.1 per cent.; with two marks, 3.3 per cent.; with three marks, 2.3 per cent.; with four or more marks, 1.5 per cent. The cases on which these percentages are founded were 529, 649, 518 and 389 respectively. Taking nearly 7,000 cases observed in recent years, the Royal Commission found that the smallpox fatality rate in persons with one mark was 6.2 per cent.; with two marks, 5.8 per cent.; with three marks, 3.7 per cent.; and with four marks, 2.2 per cent.

It is comparatively seldom that cases come to hospital with the smallpox eruption so far advanced and profuse as to obscure the vaccination marks, but in hospital statistics in this country a column is provided for "doubtful" cases, and if the figures for any large hospital be examined it will be seen that the inclusion of such cases either as "vaccinated" or "unvaccinated" does not alter the lesson taught by the statistics.

10. Sanitation cannot account for the facts above set forth.

Whooping cough and measles deaths still belong to childhood as in the last century, while smallpox deaths have been removed from childhood to later periods of life. How could sanitation account for this differentiation? If it be suggested that because sanitation confers a special benefit on children it may have altered the age incidence of smallpox, the answer is got by looking at facts. In Germany, as we have seen, vaccination is not compulsory till the second year, and over 40 per cent. of all the smallpox deaths occur under two years of age. In Scotland the vaccination age is six months, and children under six months make just about the same contribution (138 deaths per 1,000 deaths) to the total smallpox deaths as they did (139 deaths per 1,000) before the vaccination law was passed. But in the next half-year of life—the half-year of vaccination—the contribution has fallen from 153 to 47. Surely this is vaccination and not sanitation. In a community attacked by

smallpox, how could sanitation at home protect postmen going from door to door day after day in the infected districts? In Leicester, how could sanitation account for the revaccinated nurses escaping smallpox, and the nurses who had refused revaccination taking smallpox? How could sanitation cause smallpox to pass over vaccinated children and seize on unvaccinated children in houses invaded by smallpox in Dewsbury and Leicester and Gloucester? How can sanitation have caused the fatality of smallpox cases to be much less among the vaccinated than among the unvaccinated in these towns, especially if vaccination weakens the system and makes it less resistant to disease as is alleged by anti-vaccinationists? How could sanitation cause children with three or four vaccination marks to have a less fatality from smallpox than children with one or two vaccination marks? In Glasgow, while sanitation was going from bad to worse in the early part of the century, vaccination was introduced and smallpox underwent an enormous diminution, though hospitals and isolation and disinfection were entirely out of the question. In Gloucester vaccination had been neglected and in 1891 the secretary to the anti-vaccination league declared to the Royal Commission that Gloucester was a very clean town and had always been well abreast of sanitary improvements, and that its death-rate was very low. The Board of Guardians also wrote to the Commission on the same lines. But smallpox came, and the town suffered from a terrible epidemic, and ever since then the anti-vaccinationists have been declaring that there was a great want of sanitation in Gloucester. What was wanting was vaccination.

For convenience the Registrar-General many years ago grouped together places whose death-rate was low and classified them as "healthy districts." They were nearly all found to be sparsely populated rural districts where, though houses may be damp and overcrowded and other insanitary conditions prevail, there is little opportunity for infection. In such places, in spite of bad sanitation, there is a lower death-rate than in towns, because, independently of sanitary effort, the atmosphere is purer. Also there is less small-pox, and it comes at a later average age, because there is less facility for spread of infection on account of the smallness of the population and the distance of house from house and village from village. In such circumstances, though there is little sanitary effort there is little small pox, and unvaccinated persons have a better chance of escaping small pox attack than they have in large towns where sanitary arrangements are more elaborate.

11. Though isolation of small-pox cases in hospitals is a useful auxiliary to vaccination it is no substitute for it.

In an unvaccinated nation it would be utterly impracticable to provide sufficient small-pox hospitals. For whooping cough and measles hospital accommodation has not been seriously attempted, though these diseases cause an enormous mortality. Where, owing to vaccination liability to small-pox is limited, hospitals are very useful and help to give time for general revaccination. But in an unprotected community their almost certain breakdown is obvious. Who would have attended to the

sick in Leicester if all nurses had had the same experience as the nurses who refused revaccination? In an unprotected community, instead of smallpox being limited, it would spread in rapidly widening circles. Where a person protects himself by vaccination and revaccination he can defy smallpox. He carries his protection with him wherever he goes and a father can obtain protection both for himself and his family. Even if isolation in hospitals were made more stringently compulsory than vaccination has ever been in this country there could be no complete security. The protection of the individual might fail at any moment. It would depend not on himself but on other people. His cordon of protection would be a chain, the measure of whose strength would be its feeblest link, and over not one link would he have efficient control. Failure of parents to observe the symptoms of illness; failure to call in a doctor; failure of the doctor to recognize smallpox; failure in promptitude of removal; inadequacy of hospital accommodation; insufficiency of disinfection of persons and things—these would be among the risks to which even a law of compulsory isolation would leave him exposed. Obviously the risk of collapse of voluntary isolation would be much greater.

12. Vaccination is very safe.

Nothing done by human beings is entirely without risk, but the risks of vaccination have been grossly exaggerated. Some of the earliest anti-vaccinationists held that the countenance of a vaccinated child might be transformed so as to assume "the visage of a cow." Later on, in the 'fifties, vaccination was accused of making people bald-headed, short-sighted, lazy, and of causing degeneracy in music, painting, oratory, poetry, etc. Still later, the habit has been to get statistical returns of increasing and decreasing diseases from the Registrar-General, and to attribute the increasing diseases to vaccination, and to use the decreasing diseases to illustrate the view that smallpox also might decrease without vaccination. But a disease may be increasing at one time and decreasing at another. Thus at one time cholera and enteric fever and scarlet fever were blamed on vaccination, but when these diseases began to decrease, their decrease was, and still is, held to show the needlessness of vaccination.

One foul disease in particular has been blamed on vaccination. It happens that since Leicester gave up vaccination that disease has increased there much more rapidly among infants than in the rest of England. So also erysipelas, while it decreased in England by 16 per cent., increased in Leicester by 41 per cent. Similarly, diarrhoea, dysentery and bronchitis, all of which have been blamed to vaccination, increased much more in Leicester than in England. The periods under comparison are 1863-67 and 1883-87. It is not to be supposed that the increase in these diseases is due to want of vaccination, but if instead of increasing they had diminished in Leicester, it is undeniable that their diminution would have been attributed by antivaccinationists to diminution in vaccination, just as increase of many sorts of disease has been attributed by them to vaccination where vaccination is not neglected as in Leicester. The Royal Commission made most careful search for injuries resulting from vaccin-

ation, and, after the fullest consideration, arrived at the deliberate conclusion that such injuries are "insignificant" and "diminishing" and can be still further diminished. So insignificant are they that vaccination is nowhere more nearly universal than in the families of medical men, who love their children as other men do, and who know much better than other men can do, the exceeding safety of vaccination.

13. Calf lymph is now available to Boards of Guardians, etc., for the vaccination of every child in the country.

Reverting to the foul disease which has formed the principal allegation by antivaccinationists, it is to be noted that the use of calf lymph makes its occurrence through vaccination an absolute impossibility, as calves are not subject to that disease.

SOME FACTS IN REGARD TO THE TREATMENT OF INFLUENZA.

There are very few diseases which in their early stages produce such mild symptoms, and which on the other hand are capable of being so rapidly fatal in their results, as influenza. There is probably no malady in which careful nursing and the avoidance of exposure will so certainly produce recovery in the ordinary individual as this disease; and conversely, there is no illness which if subjected to poor nursing associated with exposure is capable of producing more serious consequences. While the patient may feel generally wretched in the early stages of invasion, he often does not feel sufficiently ill to force him to his bed. His fever is often moderate, and strength at this period is not sufficiently decreased to impress upon his mind the necessity of its preservation by absolute rest. The result is that very frequently the patient keeps on his feet, as does a case of walking typhoid fever, until his vital energies are so sapped that he becomes not only bed-ridden but in desperate straits, and then it is that the physician is called upon with the expectation that he will give speedy relief. Unfortunately, in many of these cases, consolidation of the lung, feebleness of the heart muscle, or renal complications are important factors in the case which cannot be speedily dissipated, and which often resist all our efforts at betterment.

Undoubtedly much more can be done in the way of prophylaxis when a person is taken ill with influenza than can be accomplished by active medicinal interference, and the prospects of rapid recovery are always in direct proportion to the willingness of the patient to lie by for a few days when he is first taken ill. Ever since the great epidemic of influenza which swept over the country in 1889 and 1890 and thereabouts, physicians have constantly met with cases of cardiac disease which have dated their illness from the attack of grippe suffered at that time. Many of these patients previous to that epidemic were already sufferers from valvular affections of the heart, but were unconscious of the valvular defect until the influenzal poison so sapped the strength of their heart muscle that a rupture of compensation occurred. In other instances persons who had previous to that illness perfectly healthy hearts have now apparently perfect valves, but nevertheless suffer from evidence of heart feebleness, continuously or upon marked exertion. In these cases the influenzal poison seems to have expended its energy solely upon the heart muscle and produced a cardiac asthenia which it is often impossible to overcome. Many of these cases of cardiac asthenia depend upon the patient having disregarded his physician's advice and insisted upon getting out of bed before the heart muscle had time to recover from the disease. Every patient should be told when taken ill with influenza that the surest way to reach perfect recovery is to call upon all the vital functions of his body to the least possible extent during his illness, resting

assured that the old motto of "Make haste slowly" holds true most emphatically in this disease. In many instances no other treatment than this advice is really needed, although in many of them it is advisable from the very beginning of the illness to administer some mild alkaline diuretic, which is perhaps best represented by the following prescription :

R Potassii citratis, ʒ ij ;
 Spiritus ætheris nitrosi, f ʒ j ;
 Aquæ dest., q s. ad f ʒ iv. M.
 S.: Dessertspoonful every four hours.

This prescription will maintain urinary flow, be slightly antipyretic in its influence, will perhaps aid in the destruction of the toxic materials, and certainly will aid in their elimination by the kidneys ; and it cannot be doubted that free diuresis for the purpose of eliminating the impurities of the body is an important part of the treatment of all infective diseases.

For the muscular and bone pains of influenza the application of a hot-water bag or hot brick to the part of the body which is in greatest suffering will often be efficacious, and is much better than the administration of coal-tar products, which are apt to help produce cyanosis and nervous depression, and which give the kidneys additional work in elimination. But if these symptoms are marked, acetanilid in what is well known as the migraine tablet, which contains two grains of acetanilid, half a grain of citrated caffeine, and one grain of monobromated camphor, may be administered several times a day ; or in its place phenacetine and salol, as these preparations seem to depress the circulation less than some of the other coal-tar combinations.

If an irritable cough, unassociated with distinct bronchial or pulmonary trouble, annoys the patient, doses of codeine, say one-tenth to one-fifth of a grain, may be administered several times a day with advantage ; and if headache is marked and of a congestive type, with cold in the head and frontal fulness, a hot mustard foot-bath repeated several times a day will often give relief, and is a much better method of treatment than the administration of drugs.

In some cases of influenza the heart seems to be considerably depressed by the action of the disease, and it is necessary to administer stimulants. But in the great majority of instances, if the patient will remain flat on his back in bed the use of stimulants is unnecessary, and if they can be avoided it is best not to administer them. If they are given, moderate doses of the alcoholic stimulants are probably best, particularly if whiskey or brandy is administered, in the form of hot lemonade, which, while acting as a stimulant to the circulatory system, will also increase the activity of the skin and kidneys in eliminating toxic materials. We do not think that the fever ought ever to be lowered by coal-tar products, but always by sponging with tepid water ; or, if the temperature is very high, by the use of the so-called sponging or rubbing of the body with a small piece of ice, using active friction with the other hand, and keeping cold applied to the head so as to avoid cerebral congestion during the sponging. Where patients object to the use of cold

water or ice, alcohol and water, half and half, may be employed, and in other instances a mixture of equal parts of warm vinegar, warm water, and alcohol may be used with advantage, in that sponging with this liquid not only cools the skin but opens the pores, washes off effete materials, soothes the peripheral sensory nerves, and by so doing tends to produce sleep.

Another drug which is of value because of its influence in increasing secretion of the skin, and because it relieves pain in the muscles and bones, is Dover's powder. But this substance often seems to produce secondary depression in blond, sanguine persons, and because of the opium it contains is liable to increase constipation, which should not be encouraged in the presence of a condition where it is desirable to aid in elimination as much as possible.—*Therapeutic Gazette*.

ENEMAS.

The position has much to do with the comfort of the patient and more so with the effect of the enema. The following positions are most used :—

Sims's or-left lateral, in any cases where the patient can be placed without discomfort or danger of tearing stitches, as in a recent laparotomy.

Dorsal in any case where patient cannot be turned on the side, and in giving rectal irrigations.

Right lateral when complete laceration of perineum exists.

Genu-pectoral, or knee-chest, position when giving rectal irrigations or when giving medicated enemas, as in cases of dysentery, etc.

Trendelenburg's position immediately after an operation when stimulating or saline enemas are given, especially if the sphincter-muscles are relaxed.

An evacuant enema consists of either pure water to which is added a little salt or soap-suds. This enema should not be very large, 1 to 2 pints being a sufficient amount. It can be given either high or low, but the latter is most commonly used.

A purgative enema is given when an increased peristaltic action is desired, and consists generally of some irritating medicine mixed with water, salt solution, or soap-suds. The following prescriptions have proved very efficient :—

R Turpentine, $\frac{1}{2}$ ounce.
Mag. sulph., 1 ounce.
Castor-oil, 1 ounce.
Warm water, 1 pint.

R Ox-gall, 15 grains.
Turpentine, $\frac{1}{2}$ ounce.
Glycerin, 1 ounce.
Castor-oil, 1 ounce.
Soap-suds, 1 pint.

The ox-gall should first be dissolved in a little warm water.

In cases of severe constipation, when the fæces are clogged in the lower bowels, it will often be necessary to remove them with the fingers, then inject 5 to 8 ounces of warm olive-oil, which should be retained for one hour, followed by an evacuant enema. In cases of operation upon the perineum, rectum, etc., the bowels should never be allowed to be moved the first time after the operation without an oil enema; this will prevent much pain and irritation to parts surrounding the stitches.

An antispasmodic enema is given in cases of colic either in adult or child. This enema gives great relief to patient in cases of tympanites. It is best given in Sims's positions. If the flatulence is caused by fer-

mented food, a purgative should be given by mouth, and an enema consisting of:—

R Mag. sulph., 1 ounce.

Turpentine, $\frac{1}{2}$ ounce.

Hot water, $\frac{1}{2}$ ounce.

given high will often give great relief. Flatulence that occurs in pregnancy is relieved by injecting through a hard-rubber syringe the following:

R Yolk of an egg;

Turpentine, $\frac{1}{2}$ ounce.

well beaten together.

An astringent enema is given to reduce chronic inflammation; to check diarrhoea and hæmorrhages from the bowels. It consists generally of starch and opium and some astringent:

R Tannic acid, 10 grains;

Tinct. opii, 15 grains;

Mucilage of starch, 2 ounce,

injected cold after each defecation.

In cases of bleeding and irritating ulcers in the rectum:—

R Nitrate of silver, 5 grains;

Water, 1 ounce,

injected cold once or twice, and is very effectual.

A stimulating enema is given in cases of low vitality. A stimulating enema should always contain some salt, should be hot, and given high in large or small quantities depending on the circumstances. It consists of some kind of alcoholic fluid, such as whisky, brandy, or pure alcohol. The pure alcohol should only be given one-half dose.

R Whisky or brandy, $\frac{1}{2}$ to 2 ounces.

Normal salt sol., $\frac{1}{2}$ to 4 pints.

Strong coffee with whisky is very good stimulating enema in cases of morphine poisoning, and is given in quantities, as $\frac{1}{2}$ pint to 2 ounces.

A nutrient enema is given to nourish the system through the bowels when nothing can be retained on the stomach. All food given through the rectum should be predigested or peptonized, should contain salt, and be warm. The quantity should be small, but repeated often. The bowels should first be well cleansed, then quieted, if necessary, by aid of tinct. opii, 15 minims, or cocaine, $\frac{1}{4}$ grain, in solution injected through a small glass syringe. The enema is always given high, and between each enema the bowels should be well flushed with normal salt solution to remove all irritating remains. A nutrient enema is best given through a funnel and tube, but a Davidson syringe can be used if the nurse is gentle and careful. The patient should be placed in either Sims's, dorsol, or Trendelenburg's position, according to circumstances.

To peptonize milk, chicken-broth or soup, beef-tea, oyster-broth or soup, or clam-broth or soup, one may use 15 grains of bicarbonate of soda and 5 grains of pancreatin to each pint of fluid used. The powder is dissolved in a little water; then the fluid, which should be tepid, is added, and the vessel containing this preparation is placed in a large vessel containing water at a temperature of 90 F. The water must reach the

margin of the food to be peptonized, which should remain in the water for exactly twenty minutes. If it remains longer or at a higher temperature it curdles and is unfit for use. After the food is peptonized it should be placed on ice and reheated when needed. Leibig's beef-extract and Wyeth's beef-juice are very good agents, and do not need to be peptonized.

The following prescriptions are valuable :—

R Either

Milk,
Chicken-broth,
Beef-tea,
Oyster-broth,
Clam-broth, 8 ounces.

R Liebig's beef-extract 1 ounce.

Hot water, 4 ounces.

Whisky, $\frac{1}{2}$ ounce,

Sodium chloride, 15 grains.

R Wyeth's beef-juice 1 ounce.

Tepid water, 1 ounce.

This nourishment should be repeated every three or four hours as needed.

A forced enema is given in cases of obstruction of the bowels and small tumors of the bowels in children. It consists of large quantities of plain tepid water or oxygen. The rectum should be emptied, then plugged with a rubber cork, through which the nozzle of the syringe is introduced, and the anus should be strongly supported to prevent expulsion of the enema. This treatment is very painful, but is sometimes very successfully administered. Hanna Kindbom (trained nurse and Hospital Review).—*Monthly Cyclopaedia*.

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY,

Stated meeting March 6th, 1901.

Dr. George A. Peters, the vice-president, in the chair.

Visitors present:—Dr. Clarence Starr, and Dr. Ryerson of the Sick Children's Hospital.

Case of Convulsive Tic.

Dr. R. D. Rudolf presented the patient and read notes of the case. This condition of tic really means a jerk or twitch or spasm. He referred to an exceedingly good article on the subject in Clifford Allbutt's *System of Medicine* by Dr. Russell, who divides it into four different classes. Dr. Rudolf thought that the first class that of simple tic, which is sometimes called habit spasm, was very badly named because it was not always due to habit. The other part of the name is also wrong; it is not convulsive; it is simple because the patient utters no ejaculations.

J. B., aged fifty-seven years, who came complaining of twitching of the muscles of the face and neck, and the duration of whose illness was then about fifteen months. He had been married seven years; no children. There was no history of spasms of any kind in any of the members of his family. His previous history showed that he had always been strong; and there was no history of venereal disease. Outside of his present trouble he was strong and healthy. The present attacks began six months ago; began by a great deal of twitching of both eyes; and much worse when walking about. When he was sitting still he was not troubled with it at all. Dr. Rudolf saw him first in March of last year; that was six months after the commencement of his illness. He suffered then from spasms of the eyelids, coming on at irregular intervals. The patient occasionally assumed a condition of risus sardonicus. He was decidedly worse in December. It involved the facial muscles as well as the orbicularis palpebrarum. This almost makes him blind. There is nothing abnormal in any of the muscles of the neck. When sitting quietly he is pretty steady. The twitchings are rapid—about one hundred and twenty to the minute. When he tries to open the eyes, he momentarily succeeds, but spasm in face and neck sets in. His forehead wrinkles up and relaxes; and he assumes the risus sardonicus condition. The strands of the platysma stand out like cords. The sterno-mastoid also involved. The head is occasionally drawn forward and to the right side. If the eyelids are forcibly opened, the condition is found to involve the external muscles of the eyes so that the eyes are rolled about. The tongue does not seem to be affected; and speech is unaffected. When he stands the spasms are worse and so close his eyes that he is partially blind. His head rotates from side to side and he endeavors to hold it with both hands. Saliva increases in the mouth, and a peculiar snuffing

induced. These are very constant in the disease. The eyes were examined by Dr. Reeve, who found them practically normal beyond a little presbyopia. There is a good deal of watering of the eyes. Romberg's symptom is absent. The knee jerks are absolutely gone, when tried a few weeks ago. There is no headache, but occasionally pain about the muscles of the neck when the spasms are on. There are no abnormal sensations anywhere. The spasms are all gone when he is asleep. He is almost, if not quite, as bad when sitting in the dark as when sitting in the light. He can sit or lie in bed with his eyes closed and be pretty free from the spasm, but if he opens them the spasms begin at once. The act of opening them brings on the spasms—in the light. When the spasms are very bad, he puts his hands to his head and neck, and by pressure he slightly controls them. It is quite evident that this case belongs to the first class of Dr. Russell, viz., simple tic. He has not any of the verbal ejaculations, except under sufficient provocation. It is certainly not psychical.

As regards the cause of this condition. There have been numerous causes mentioned. It is frequently habit. Blephorospasm from conjunctivitis, and lasting long years after the irritation has gone. Habit spasm is a bad name because it is not present in all cases. It is not hereditary in this case. The age: most commonly it commences in youth, but occasionally, as in this man, who was fifty-five or fifty-seven when it commenced. Irritation from some scar is another cause, but there is no such cause to be found in this case. The most common cause, or associated condition, seems to be some error in accommodation. Dr. Sinclair found error of accommodation in forty-one out of forty-nine cases,—quoted by Dr. Russell. There is very little wrong with the eyes in this case. The case is a typical one. Dr. Osler mentions that a dozen of these cases may be attending any clinic. Dr. Rudolf does not think them so common. He came across a very slight case this winter. In the treatment he has tried various remedies. Bromides had no effect at all. Nitro glycerine absolutely had no effect here. At present the patient is taking liquor arsenicalis—five minims three times a day. Dr. Rudolf thinks he is slightly better than he was at first.

The patient was examined by the Fellows. present and it was found that the man had a large right scrotal hernia.

Dr. Oldright asked whether the zinc salts were of any worth in these cases.

Dr. Primrose referred to scars as a cause of tic; and asked whether it is common to have a unilateral condition in these cases, or common to have both sides involved, or one side only.

Dr. Peters asked if Dr. Rudolf had discovered any reflex exciting cause excepting the hernia, which he has had a great many years; for instance, anything in the Schneiderian membrane, and if stuttering has any relation to this disease. He also referred to the case of a bandsman in one of the city bands, who stutters very badly, who jerks his head to the side frequently and utters ejaculations. Dr. Peters has noticed quite recently that someone has been operating on these cases by cutting the seventh nerve and transplanting the spinal accessory into its distal end. He claims in that way to have got rid of the spasms, without having

complete paralysis. This operation had done it in two or three cases with beneficial results. Possibly, taking out a section of the orbicularis muscle might relieve the intensity of the eye spasm.

Dr. Rudolf in reply: He thought that stuttering would come under the heading of the co-ordinated form of tic, not this unco-ordinated form. He has seen cases of that kind,—inspiratory form of stuttering. Cutting the facial nerve and joining it to the spinal accessory might do in a unilateral case, but does not see what good it could do in this case where the condition is generalized. Dividing of the orbicularis muscle on both sides might possibly do some good. The prognosis at the present is very poor indeed. Regarding Dr. Primrose's question, if due to a scar, would it be unilateral,—he does not think so always. Dr. Reeve strongly suspected there would be a scar somewhere. Dr. Rudolf has not tried the zinc salts. The prognosis is exceedingly poor, and Dr. Rudolf stated he was glad of the suggestion of operation on the orbicularis palpebrarum. The condition now, practically makes the patient blind. The man has had right inguinal complete hernia for forty years.

Tendon Transplanting in Paralytic Deformities.

Dr. Clarence L. Starr by invitation presented this paper with the histories of four cases. The treatment of paralytic deformities has been until recently by means of mechanical support, and where operative treatment had been added, it was in long-standing deformities, and in these a simple operation has been done and the necessary mechanical support applied afterwards to prevent relapse. The outlook for that has not been bright. Within the past few years other attempts have been made to prevent or correct deformity. In 1881, transplanting of the peroneal tendon into the tendo-Achillis was first performed. One cannot claim that the operation will cure or is applicable in the large number of cases of deformities. Some are, however, completely cured. Operation is clearly indicated where a group of muscles are left unimpaired while others are paralyzed. Better results may be looked for here than elsewhere. Dr. Starr then reported the following four cases in detail.

Case 1. A boy five years of age, who had had acute infantile spinal paralysis with complete paralysis of the right limb. The peronei muscles remained inactive. The patient walked on the outer border of the foot entirely. The tendon of the peroneus longus was isolated; a second incision made above the ankle joint, and the tendon of the tibialis anticus exposed. These tendons were united. The foot is now perfectly flat.

Case 2. A young girl fourteen years of age. Perfect valgus was present in this case—equino-valgus, the calf muscles being paralyzed as well. It was desirable to get a firm base of support in the right leg. An oblique incision was made from above the outer malleolus downwards and inwards so as to expose the peronei tendons and the tendo-Achillis. The brevis was divided and carried underneath the tendo-Achillis and attached to a slip of the flexor longus hallucis. The peroneus longus was then divided and attached in the same way to the tendo-Achillis. The

wound was closed and splints applied. Passive motion was commenced in three weeks; and in six weeks the patient was able to bear her weight upon it, and she is now able to walk.

Case 3. A young lad aged 18 years with marked valgus deformity resulting from infantile paralysis. He walked with a stiff and awkward gait. An oblique incision was made over the extensor tendons. The extensor longus digitorum was isolated. This patient was allowed to walk in six weeks; and his gait was very much improved.

Case 4. This patient, a boy aged five years, was presented to the Fellows. He had had an acute attack of paralysis in July '99, which involved both lower extremities. The right gradually improved and is now apparently totally recovered; the left, only partially deformed, showed the regular typical club foot. In January 1901, the peronei and extensor muscles were permanently paralyzed, giving no response to the faradic current. The boy walked altogether on the upper surface and dorsum of the foot. Walked distinctly on the outer side, the plantar surface being turned inward and backward towards the opposite foot. There was marked toe drop except in the great toe. The boy was operated on January 23rd when a curved incision was made exposing both peronei and the tendo-Achillis. The wound healed by primary union were removed only a few days before his being presented to the society. There is noted marked improvement in the position and stability of the foot. The plantar surface comes in contact with the floor at every step.

A great deal may be done for these otherwise helpless class of deformities, and it is essential that primary healing be secured or the operation will prove useless latterly. Kangaroo tendon should be used in these operations; silk is likely to come out later on. Motion should not be allowed until four or five weeks, as tendons unite very slowly. In this case the extensor communis digitorum was attached to the tibialis anticus.

It is absolutely necessary if you use a mechanical support of any kind to replace it by a larger one so that the patients are thoroughly disgusted when they arrive at adult life. Dr. Primrose has suggested the possibility of nerve grafting; but Dr. Starr did not remember ever hearing of any case where that had been attempted. He had heard it discussed in the American Orthopedic Association.

Unusual Dilatation of Bladder.

Dr. William Britton presented these pathological specimens and described the conditions present in each patient. The first occurred in a gentleman, 75 years of age, who has always lived a careful life. He had come to Dr. Britton last winter complaining of difficulty in voiding his urine. He had to use more force than was natural. Dr. Britton examined him and found what appeared to be a tremendous cyst of some character extending up as far as the lower margin of the ribs on the left side, the greater part of the tumor appearing to be to the left of the median line. The doctor used the catheter the following day and drew off seventy or eighty ounces of urine. The character of the urine was

the same, as was found subsequently at post mortem. After a few days he was seized with coma and died in this comatose condition after seventy-two hours. A post mortem examination was made by Dr. H. B. Anderson. Found prostate very much enlarged; ureters much dilated; kidneys about normal in size, but evidence of hydro nephrosis. Bladder was full with about seventy or eighty ounces. The urine was limpid, almost as clear as water. Dr. Britton did not know the exact quantity of urine he was voiding prior to his coming to see him. The sp. gr was 1,008. Bladder was a great deal hypertrophied. The walls were thickened, and there were very small extravasations beneath the mucous membrane.

Cancer of Stomach.

The case of cancer of the stomach occurred in a man who in ordinary health weighed 196 lbs., a machinist by occupation. He had always lived the life of an old country Englishman, that is, he ate as much as he wanted to. He was very robust, and Dr. Britton had known him for ten years. Last fall he began to become emaciated. He was reduced from his former weight of 196 pounds to 117 pounds. That would seem to be almost beyond belief. He had been suffering about a year and one half with the ordinary symptoms of cancer, except that he suffered from no pain from first to last. In the first instance, one and one half years before he was seen by Dr. Britton, he had discomfort in the stomach which would continue for two or three days when he would vomit large quantities of undigested food, and would be relieved by drinking large quantities of water. The intervals of relief became shorter and shorter. Dr. Britton was not able to find any tumor and nothing but positive evidence of closure of pylorus. He was fed per rectum for two weeks during which time he gained seven pounds in weight. He was seen by Mr. Cameron who performed gastro-duodenostomy. He died a short time afterwards. On opening the stomach it was found to be very much enlarged, the walls being very much thickened. At the pyloric extremity there was a soft cancer attached to the walls all round, but there was sufficient opening so that the doctor could pass his finger easily through the pylorus. When food entered the stomach, the cancer was pressed down and acted as a sort of ball valve. There was no exit from the stomach to the intestines. Before the operation, Dr. Anderson made an examination of the contents of the stomach, and the details of the report pointed towards the existence of cancer. HCl was not present. No lymphatic glands were affected at all. The cancer was a very small one, and it was extraordinary that it should have caused death by starvation. The lungs were in a perfectly normal condition, and the other organs of the body as well; no metastasis.

Dr. Fotheringham asked if a microscopical examination had been made as to the exact character of the new growth.

Dr. Rodolf asked the composition of the nutrient enemata which produced the large gain in weight.

Dr. Peters thought it a remarkable feature of the case, the pronounced loss in weight with so small a growth; and the fact that the

cancer had evidently produced death in the end was one which would appear to have been amenable to treatment by pylorotomy, there being no enlargement of glands and no metastasis of the liver. He considered it a rare condition to find cancer as old as this without these conditions being present. Most cases when discovered are so far advanced that you cannot remove the pyloric end of the stomach on account of metastasis etc. Symptoms of cancer of the pylorus are very slight in character for a long time, and by the time a positive diagnosis has been made it has gone past the reach of the surgeon. Gastro-enterostomy was the proper operation had the patient been strong enough to stand it.

Dr. Primrose began the discussion on the bladder case. A question which has occurred to him in connection with a case recently under his care—whether it is wise to interfere at all with a greatly distended bladder, or whether it is not wiser to open abdomen and establish drainage. He further referred to several cases in his own practice.

Dr. Silverhorn asked whether Dr. Britton had any difficulty in passing a catheter.

Dr. Oldright mentioned a case where a man had not passed urine for 36 hours, he drew off 60 ounces of urine. What does Dr. Britton consider was the cause of death in his case?

Dr. Britton stated he did not look upon it as a case of sepsis.

Dr. Peters had stated there must be something else than that.

Dr. Britton in reply stated that a microscopic examination had been made of the stomach and the report was cancer. The enemata consisted of thoroughly peptonized milk.

As to the bladder case, he had not been able to assign the cause.

GEORGE ELLIOTT,

Recording Secretary.

MISCELLANEOUS.

EMERGENCY HOSPITAL AT THE PAN-AMERICAN.

By HERBERT SHEARER.

A very pretty hospital building stands near the west end of the Mall. Floor area rather than elevation is a prominent feature in the construction of this important adjunct to the exposition. Utility, first, last and all the time is the prime consideration in this design though it is by no means a case of utility unadorned. In conformity with the general Exposition plan the free Spanish renaissance has been treated, in this instance, with a strong leaning towards the old mission interpretation.

Having a frontage of 90 feet on the Mall; the main wing has a depth of 38 feet with a height of but one story, except in the center, where it assumes the form of a square tower with a rounded top. This tower attains to the pretentious height of two stories surmounted with two flagstuffs. One staff supports the Exposition flag and from the other waves the well known red cross banner, the only universal international emblem that is recognized and revered in all countries.

A rear wing one story high runs back from the center portion a distance of 56 feet with a width of 32 feet. This form of construction lends itself readily to this picture-que reminder of the early struggles of our first missionaries.

Color, here as everywhere throughout the grounds, adds its mantle of beauty to the odd and in many cases obsolete methods of construction, penetrating, rather than clothing the building in the warm changing



tints of the sunset. A low wandering adobe mission house covered with heavy red tiling, its weather stains retouched by the gorgeous rays of the departing sun, may be readily imagined while looking at this rehabilitation of the past.

Any antiquated illusion that may be conveyed by the outside appearance of this building is, however, at once dispelled by a visit to the interior.

Modern arrangements that are both convenient and sanitary mark every feature. Approved medical and surgical appliances have been carefully selected in regard especially for their adaptability to emergency work and the exigencies that are likely to arise.

The main hospital entrance is from the Mall opening directly into a handsome rotunda decorated with tropical plants and suitable hangings of pictures, drapery, etc.

The main office is situated at the farther left hand corner of this rotunda where it is carefully tucked away under the staircase forming an irregular alcove. It contains telephone and electrical annunciator, and messenger call service, with other modern and necessary appurtenances.

As this is lighted from above and encircled by a round gallery opening through the upper story the effect is very pleasant and agreeable. The first floor front contains in the extreme western wing, two male wards with seven cots each, a bath room, physician's office, a morgue and a linen chest. The eastern wing contains a woman's ward, large enough to hold a dozen cots, with direct communication to the woman's bath room. This wing also contains an office for the superintendent of nurses, private physician's office, a linen closet and other conveniences.

The upper story is intended for the use of the resident physicians and the necessary attendants. It is fitted up with four pleasant, comfortable bedrooms and a bathroom. The rear wing extending back from the main entrance, contains the operating room, sterilizing department and instrument cases. Immediately across the hall is the emergency bathroom and patients' waiting-room. Still farther down the corridor is located the kitchen, pantry and dining-room, which is intended for the use of patients only, as the staff have their culinary department in the service building situated but a few yards distant. In the extreme southern end of this wing is the storage room for electrical ambulances; this room also contains a station for recharging the batteries; electricity for this purpose being brought from an electric circuit provided for the electric launches on the Grand Canal. In addition to the two electrical ambulances, a steam or gasoline motor ambulance will be provided to be ready in case of a possible failure of the electrical current. The building is provided with natural gas for heating purposes and for cooking when necessary for the patients.

Water, gas and electricity is carried to every part of the hospital in the most approved manner.

The building is plastered throughout and rendered sanitary and germ proof so far as possible, in every instance. The staff in attendance are uniformed to grade according to universal custom.

In the matter of equipment and appliances, everything is of the newest and best. A new litter attracts considerable attention; it is carefully balanced and so arranged that one attendant can operate it easily and noiselessly as it runs on two wheels about 20 inches in diameter which are fitted with large inflated rubber tires. Sterilizing apparatus with an apartment for instruments and another for towels and linen, is another necessary arrangement.

Roswell Park, M.D., is the Director, Vertner Kenerson, M.D., Deputy Director and Dr. Alexander Allen, is the resident physician, a staff which will at once inspire confidence in all who are acquainted with these gentlemen or their work. The efficiency of this department is an illustration of the manner in which the Exposition is designed and executed in all its departments. Everything has been carefully arranged according to a great comprehensive plan, the details of which have been worked out in every instance with careful conscientious precision.

In regard to the importance of this adjunct to the Exposition it may be said that up to the first of March five hundred and four cases have been treated on the grounds, only one of which proved fatal. These include all forms of sickness and accidents to workmen employed upon the

construction work. In this connection it is well to note that the number of cases treated at the Omaha Exposition was about three thousand while the history of the hospital at the World's Fair in Chicago gives a total of 11,602 medical and surgical cases treated, resulting in 69 deaths.

It is hoped to have less use than this for the hospital at the Pan-American though in the immense crowds who will attend, no doubt, many individuals will have occasion to appreciate the provision that has been made in this direction.

THREE DANGEROUS OPERATIONS.—J. B. Deaver, (*Philadelphia Medical Journal*) protests vigorously against the abuse of three common operations in gynecology. First of these is repair of lacerated cervix. The condition is so common that it is more normal than pathological. In the absence of special indications, such as the cancerous diathesis, it had better be left alone. Salpingitis, pyosalpinx and adhesions strongly contraindicate, and endometritis should be previously corrected. Curettement of the uterus is a dangerous operation and calls for a rigid observance of aseptic and anti-septic details. In acute endometritis, the possibility of perforation and in chronic endometritis, the possibility of lighting up a latent salpingitis must be borne in mind. The presence of gonococci positively contraindicates curettement. Divulsion of the cervix should never be done except under anesthesia and with complete cleanliness. It ought never to be done in the office. It is unsatisfactory in cervical stenosis and a failure for the correction of flexions.—*St. Louis Medical Review*.

ORGANO-THERAPY IN GYNECOLOGICAL THERAPEUTICS. Harvey P. Jack (*International Jour. of Surg.*) says that there has been more advance along the line of organo-therapy than in any other department of experimental therapeutics. The use of thyroid extract in cretinism and myxœdema is well known, but medication almost as specific, and results almost as striking, are to be obtained by the use of this and the parotid, mammary and ovarian gland extracts in gynecological therapeutics.

Thyroid extract is one of the most reliable vaso-constrictors, and in gynecology its use is indicated in hemorrhagic affections of the uterus and in various forms of pelvic congestion; the best results are to be expected in fibromas and pathologic conditions of recent development. Polk has noted also an increase in nervous and muscular energy, improved nutrition and lessening of pain. Shober has obtained equally good results in fibromas from the administration of mammary gland extract, and it is not followed by the symptoms of thyroidism. It controls the hemorrhages, reduces the size of the tumors, and in some cases causes their disappearance. It does not seem to have any effect on the hemorrhages of inoperable cervical cancer, as does thyroid extract. This may be explained by the fact that thyroid extract has a special catalytic action upon the epithelial elements of the endometrium. In two cases of inoperable cancer of the uterus in the writer's practice, thyroid extract controlled the hemorrhage, and in one case the pain. Parotid extract is the best remedy for dysmenorrhea and ovaritis. Pelvic exudates soften and are often absorbed. Menstruation becomes regular, less in amount

and shorter in duration, while the headaches and nervous symptoms so often accompanying the monthly period are, as a rule, cured.

The ovarian extract is indicated in all cases of nervous trouble at the menopause, and also where it is desirable to increase the flow from the uterus. The ovary has, besides its function of ovulation, another almost as important, that of internal secretion, and, like the thyroid, secretes an active oxidizing agent, spermin, that aids in the metabolism of the blood.

Parotid extract is the best ovarian sedative, and ovarian extract the best ovarian stimulant. It is probable that as we learn more of the different physiological effects of each gland, as studied alone and in combination, more exact therapeutic application may be deduced and gland therapy may take the place, in a large measure, of surgical procedures. —*Am. Gyn. and Obst. Jour.*

SURGICAL HINTS. Never minimize to a patient the importance of any operation. They all offer certain dangers, and no branch of your art may be considered as of a trivial nature.

If you are compelled to put on a bandage rather tightly, it is well to warn the patient that it must not be removed, but that, if it becomes painful, a few snips of the scissors will give relief.

No operation about the mouth, such as removal of the tongue, or about any of the orifices of the body, ought to be undertaken without previous methodical disinfection continued for several days.

Never be in a hurry to amputate in wounds of the fingers or hand. Observation under treatment by antiseptics will often result in saving important parts, which at first seemed quite hopeless.

In small abscesses, occurring in infected wounds, whether they involve the whole or only a portion of the wound, there is no better treatment than the removal of stitches, washing out with peroxide of hydrogen, and thoroughly painting the pyogenic surfaces with tincture of iodine.

It is a fault of many operators that they are constantly asking questions of the anaesthetist during operations. Only employ a man you can trust, and then leave him alone to bear the sole responsibility of his share in the operation. He may have a hard enough time in coping with a patient who takes the anaesthetic badly without being disturbed by constant admonitions.

INDIGESTION. T. Lauder Brunton lays down the following rules for the treatment of chronic function in dyspepsia: The first rule is to eat slowly, masticate thoroughly, and insalivate completely; three things which are by no means always the same. The next rule is to take solids and liquids separately, the latter in the shape of hot water on rising in the morning, between eleven and twelve in the forenoon, about four or five in the afternoon, and at night before going to bed. When these rules do not suffice to remove the dyspepsia, the patient must take his farinaceous and proteid foods at different meals alternately, a farinaceous meal at breakfast-time and again at five o'clock, and meat or fish meals at midnight and at eight o'clock. In some cases it will be found advantageous to supplement the gastric juice with a little acid and pepsin. A little alkali with calumba may be given before meals, or if there is gastric

catarrh some substance containing tannin, such as infusion of gentian, may be preferable. In cases with flabby tongue perchloride of iron with quassia will probably be of more service. When there is gastric dilatation which will not yield to the measures above mentioned, it may be necessary to wash out the stomach in the morning or at night.—*The Clinical Journal*.

TREATMENT OF THE GRIPPE.—Knowing that influenza, as rheumatism, is particularly frequent during the cold and wet season, and has for the mucous membrane a predilection analogous to that of rheumatism for the serous membranes, Dr. Bourget, Professor Medical Clinique, has been experimenting on the effects of a treatment similar to that of rheumatism. His liniment is composed as follows:—

Salicylic acid, ʒj;
Salicylate of methyle, ʒijss;
Essence of eucalyptus, ʒj;
Camphorated oil, ʒj;
Spirit of juniper, ʒiv.

A portion of this mixture is rubbed strongly over the chest and the back of the patient, who is then closely covered up to the chin with the bedclothes. The heat of the bed caused evaporation of the aromatic essences, and favours the absorption of the salicylic acid, and the patient experiences a sensation of *bien être*.

Not only for influenza has Prof. Bourget used this liniment with success, but also in several affections of the respiratory organs.—*Medical Press and Circular*.

AN OINTMENT FOR CHRONIC BLEPHARITIS.—

R Binoxide of mercury..... 1½ grains;
Lead water..... 10 drops;
Petrolatum..... 5 drachms.

M.

To be applied night and morning to the free edges of the lids.—*N. Y. Medical Journal*.

HEMORRHOIDS.—In the Richmond Journal of Practice for January, John G. Rennie gives a plan of treatment in painful hemorrhoids.

His method of treatment includes rest in bed with elevation of hips, light diet, contents of bowels soluble, and cleanliness. To avoid constipation he uses cascara, 20 to 30 minims of the fluid extract once or twice daily.

He uses the following prescription locally:

R Acid carbol.
Menthol.....a.a. gr. xii
Cocaine hydrochlorate..... gr. xiv
Acid Tannic..... gr. xvi
Vaselin alb.q.s. ʒi

M. Sig. For local use.

—*Charlotte Medical Journal*.

LUMBAGO AND MUSCULAR RHEUMATISM.—

Menthol	20 gr.
Salicylic acid	1 $\bar{3}$
Chloral hydrate.....	
Camphor.....	aa 40 gr.
Powd. capsicum	90 gr.
Croton oil	5 gtt.
Petrolatum	2 $\frac{2}{3}$

Rub in vigorously, a small quantity at a time.—*Med. Fortnightly.*

CHRONIC ECZEMA AND PSORIASIS.—

R Creolin	$\bar{3}$ ss.
Hydrarg. ammon	gr. x.
Petrolati	$\frac{3}{4}$ i.

—DAVID WALSH.—*Medical Record.*

Infuse in:

Boiling water	250 gm.
Filter and add:	
Asafœtida	4 gm.
Yellow of egg	No. i.

S. For rectal use.

ANTINEURALGIC PILL.—

R Zinci valerianat.....	0.05 cgm.
Quininæ valerianat	0.10 cgm.
Ext. opii.....	0.01 cgm.
Ext. bellad	0.05 cgm.

For one pill. S. Two to six daily.

—YVON.

SWEATING IN PHTHISIS.—

R Scopolia (alkaloid)	0.015 mgm.
Spt. vini rect ..	6. $\frac{1}{2}$ gm.
M. S. Gtt. x. three times daily.	

—DUCKWORT AND DUNSTANT.—*N. Y. Medical Record.*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
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The Oldest Medical Journal in the Dominion : Established 1867.

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EDITORIAL.

MEDICAL AMALGAMATION IN TORONTO.

As the LANCET by an editorial in April last inaugurated the movement for a friendly approach between the two medical teaching bodies in Toronto, it may be not out of place to detail the course of the negotiations with that end in view now brought to a close by the refusal of the Corporation of Trinity Medical College to assent to the terms formulated by the joint committee. While negotiations were pending we refrained from any comment which might be a breach of confidence or which might tend to make more difficult the delicate adjustments necessary in such an undertaking. Now that the joint committee which has had the matter in hand is dissolved, a statement of the sequence of events in the negotiations is permissible, and is, moreover, due to the profession at large.

After the failure to secure by the "McKay Bill," at the last session of the Legislature, better relations between Trinity Medical College and the Provincial University, many prominent members of the two medical teaching bodies in Toronto thought it to be an opportune time for the burying of old differences and for uniting in a scheme for placing medical education

in Ontario on a more satisfactory basis. At their instance the Senate of Toronto University appointed a committee to act as a joint committee with one appointed at the same time by the Corporation of Trinity Medical College. The personnel of this joint committee was as follows: From the Senate of Toronto University—Rev. Principal Caven, Chairman, with Sir Wm. R. Meredith, Chancellor, Mr. Justice Moss, Vice-Chancellor, Sir John Boyd, Hon. S. H. Blake, Drs. I. H. Cameron, A. H. Wright and A. B. McCallum. From Trinity College there were Drs. W. B. Geikie, Dean of the Faculty; J. A. Temple, F. Le M. Grasett, Chas. Sheard, J. L. Davison, N. A. Powell, G. A. Bingham and J. T. Fotheringham, with Dr. D. J. G. Wishart, the Secretary of the Corporation. This joint committee met before the summer vacation and appointed a sub-committee, composed of Dr. Cameron, Chairman, with Drs. Wright and McCallum, and Drs. Temple, Powell and Davison, to confer as to the general principle of amalgamation and its feasibility. This sub-committee's report was brought in, received and adopted by the joint committee in June, 1900, and was to the effect that amalgamation was desirable, and that no insuperable obstacles to its accomplishment presented themselves. In October the sub-committee was enlarged by the addition of Drs. Charles Sheard and R. A. Reeve, Dean of the Faculty of Toronto University, with Dr. Sheard as Chairman, and was instructed to prepare a statement of appointments, emoluments and other details as a tentative basis for the formation of a new joint Faculty. This they did after many laborious sittings, and submitted their report to the joint committee shortly after the New Year. The joint committee received this report and, prior to laying it before the Senate of Toronto University and the Corporation of Trinity Medical College, the bodies from whom it had its origin, thought it wise to transmit it to the two Medical Faculties concerned, for an expression of their opinion as to the details proposed, and for further suggestions and amendments.

The Toronto University Medical Faculty made no response to the request of the joint committee for an expression of their opinion, and the reply received from the Corporation of Trinity Medical College dealt rather with a proposal in favour of "federation upon broad lines," with retention of their identity as a teaching body, than with amalgamation and the conditions proposed by the sub-committee. This being submitted as Trinity's final statement in the matter, the joint committee, having no further purpose to serve, dissolved, and the negotiations may be held to be at an end.

Other facts that appeared during the negotiations may be mentioned.

The scheme, so far as the general principle at any rate was concerned, met with favour and support; firstly,—from the Senate of Toronto University, particularly its lay members; secondly, from the Government, which unofficially but plainly announced its sympathy with the project; thirdly, we believe from a majority of the members of both medical faculties. There seems to have been uncompromising opposition to amalgamation by certain members of both medical faculties for reasons that do not appear on the surface, and this minority was able to prevent the consummation of a project which we believe met with very general endorsement by both the profession and the public.

Notwithstanding that the episode seems closed, we venture to reiterate the opinion expressed a year ago—that an amalgamation would have been the best, if not the only means of settling present difficulties and disagreements, and laying the foundation for a permanently satisfactory system of medical education in the Province. It must appear to the most casual observer that, while undergraduate teaching in this city is well up to the standard at present prevailing in other centres, we have not arisen to the fulness of our undoubted opportunities in the matter of medical research and direct contributions to scientific medical literature, and we feel assured that these most desirable ends would be greatly advanced by uniting all our resources and energy to further them.

AUTOINTOXICATION IN RELATION TO INSANITY.

As a result of the excellent research work that has been carried on during the past few years in the asylums for the insane in Europe and America, much knowledge has been gained of the etiology of insanity, which brings the treatment of many cases within the range of practical therapeutics, where hitherto little hope of cure would have been held out. Both as regards prevention and cure the study of insanity has thus assumed a position of much greater importance to the general practitioner, who can no longer afford to disregard derangements or diseases of such moment to the afflicted individual and his friends, nor to think that his duty as a physician is done when the unfortunate has been relegated to a place of confinement. In no class of disease has progress been so much retarded by reason of their being too often regarded as outside the realm of pathology, as if insanity were due to supernatural agencies rather than the result of gross or minute structural lesions in the brain. Fortunately more rational ideas now prevail and the relationship of mind and matter are better understood. Hazy, indefinite, almost superstitious, ideas, previously held, have given place to more rational conceptions and the basis

of a definite pathology has been laid, with a more or less satisfactory classification based on etiology, or on structural changes in the brain itself. The result has been to create a new interest in a field hitherto much neglected. One need only mention the good work that has followed upon more attention to surgical treatment in the insane, even though at times certain individuals may have allowed their enthusiasm to carry them to extremes in reference to it.

The more careful study of the influence of morphine, cocaine, alcohol and other poisons in producing mental disease, as well as of the bacterial toxins in causing the delirium and other psychoses so often seen in the acute infective diseases, has thrown a flood of light upon the etiology of insanity in general, productive of excellent practical results. The relationship of the brain and its functions to the general nutrition is also more clearly understood, thus explaining the effect of chronic diseases of the liver, kidneys, bowels, etc.,—conditions associated with auto-intoxication—in upsetting the mental equilibrium of susceptible persons. Hamilton, Berkeley and others have particularly called attention to this matter and insisted on its importance.

Many instances have been quoted where removal of the source of toxæmia—as constipation or obstipation, has been followed by a prompt cure. The treatment is so simple and rational that such a possible cause should always be borne in mind. A careful inquiry into the etiology of all cases of insanity coming under the physician's notice would not infrequently discover conditions amenable to treatment and restoration to health from a condition otherwise hopeless.

In view of the fact that other countries are doing so much to assist the scientific study of insanity and whereas the increase of cases in Ontario is continually calling for more accommodation for confining these unfortunates at a great expense to the country, it seems a pity that our local legislature does absolutely nothing towards establishing facilities for research work in this direction, with a view to preventive measures.

THE PROPOSED BILL FOR THE TREATMENT OF INEBRIATES.

In the January number of *THE LANCET* we gave an abstract of the proposed bill for the treatment of inebriates. This bill, it will be remembered, was drafted by the Public Health Committee of the Ontario Medical Association and a committee of the Prisoners' Aid Association, and was ratified by the Ontario Medical Association, in June last. The principle of that bill, it will also be remembered, has been endorsed

by the Canadian Medical Association and by the Toronto Medical Society. The bill was drafted a year ago at the request of the Premier of Ontario, was endorsed by the medical members of the Legislature, so that it was fully expected that the bill would have been introduced last session. We now learn, we must confess, to our surprise, that it is quite possible that it may not even be brought down this session. At an interview with the Provincial Secretary a few weeks ago, he stated that although the members of the Government and the inspectors of prisons were in full accord with the provisions of the bill he could not state when it would be introduced.

Failing to introduce the bill last session—from whatever cause—we took it for granted that it would be brought down without fail this session, and we expected that reference would be made thereto at the opening of the legislature. While we cannot conceal our disappointment at this set back, possibly no good would result from denouncing the Government for its reprehensible tardiness in dealing with so important a question. Having failed to move the Government by deputations and direct application, it now remains to be seen what may be accomplished by an appeal to the individual members of the legislature. We doubt that one member in ten really understands the question. If the members once understood the question we believe the bill would be introduced and passed without difficulty this session. Here is an opportunity for missionary work on the part of each member of the profession throughout the Province. Copies of the proposed bill will be furnished members of the Medical Council from whom they may be obtained. If each member of the profession would procure a copy and would bring the question personally to the attention of his representative in the Ontario Legislature, the whole question, we feel assured, would be settled in short order. Let each member of the profession realize his responsibility in this important matter and act accordingly.

Copies of the bill may also be obtained of Dr. Rosebrugh, Confederation Building, or to Dr. Gilbert Gordon, 646 Spadina Avenue, Toronto.

THE MALPRACTICE SUIT AGAINST DR. CONERTY.

We have previously called the attention of the readers of THE LANCET to the genuine hardship inflicted upon Dr. J. M. Conerty of Smith's Falls in having to defend a suit for malpractice that has been dragging through the courts for the past five years. In fighting this case Dr. Conerty has not only been upholding his own rights and honor but those of the profession. The prolonged litigation has almost ruined him finan-

cially and in the absence of any medical defence union, this is a case where his medical brethren should show their sympathy and appreciation by coming to his assistance. We cannot do better than quote from a circular issued to the members of the profession in No. 17 medical district by their representative, Dr. R. W. Powell, of Ottawa.

"The annoyance, indignity and financial loss involved in the defence of such an action—particularly when the plaintiff is penniless—is a hardship which should arouse our sympathies. Dr. Conerty has made a good fight and is determined to do so to the end. His interests in the case are largely our own. It is in the absence of any medical protective or defence association that I am compelled to make this appeal and I hope that every physician in this division will do honor to himself and his profession by contributing whatever sum he may feel disposed to in order that the professional standing of a brother practitioner may be vindicated. A moderate subscription from each one of us would be greatly appreciated by Dr. Conerty—with whose consent I am making this appeal. Any subscriptions to me will be acknowledged and forwarded."

We hope the appeal made by Dr. Powell may meet with a ready response by the profession throughout the Dominion. THE LANCET will be pleased to receive and acknowledge subscriptions to enable Dr. Conerty to bring the case to a satisfactory termination. The final hearing has been set for April 29th. Besides individual subscriptions, various local medical societies could greatly assist by following the example of the Medico-Chirurgical Society of Montreal in voting a sum for the defence of a case in which all are interested.

THE ONTARIO MEDICAL ASSOCIATION.

The annual meeting of the Association will be held in Toronto on June 19th and 20th. The committees have been at work for the past two months and the arrangements are now well under way. The Committee on Papers, under the guidance of Dr. Machell, have arranged for discussions on the following subjects, which it is thought will be of interest from medical, surgical and pathological aspects alike,—*Gastric Ulcer* and *Empyema*. The discussions will be opened in each case by a physician and a surgeon by short papers, and general discussion will follow.

There will also be a discussion on Extra-uterine Pregnancy.

As this Association is the Provincial medical body, it is hoped that all parts of the Province will be well and fully represented, not alone by the presence of members or those intending to become such, but in the active interest in the proceedings, of which it is the privilege of all to partake.

In the course of a few days cards of notice will be sent to all members informing them of the date of meeting, and asking for titles of papers or reports of cases to be presented. It will assist the committee in their work if the titles of papers be sent to the secretary at an early date.

POST HOC ERGO PROPTER HOC.

The following delightful document was recently handed in anonymously at the door of a house in Toronto which bore the yellow placard of diphtheria. The *naïvete* and childlike faith of the writer of it, his absolute disregard of cause and effect, his evident kindliness of intention, find their full and adequate explanation in the legend inscribed at the foot of the manuscript :—"Receipt from Ireland." The medical man who was in charge of the case, and who is so ungrudgingly credited with sufficient capacity to "easily treat the boil," need not be much of a philosopher in order to keep his temper, and, instead of resenting too violently the attempted interference with his management of the case, to ruminate upon the extraordinary persistence of the Galenian theory of *humours* in the public mind in general, and the perennial fount of humour, usually as here, unconscious in the Hibernian mind in particular:—

"SURE CURE FOR DIPHTHERIA.

Lately given to one after we have lost one child—we wish we had known of it before.

Get 4 salt herrings right in the brine. Slice them in thin long strips. Wrap them thickly all round the throat. Bind them round with cotton strips, and flannel afterwards. Let them be on all night. In the morning a boil will be raised through which the badness will come instead of going into the system. Of course the doctor can easily treat the boil.

FROM A SYMPATHIZER."

Receipt from Ireland.

EDITORIAL NOTES.

The Medical Act of British Columbia.

An attempt is being made at the present session of the Provincial Legislature of British Columbia to get an amendment to the Medical Act so as to allow all graduates of recognized colleges or licentiates from any part of Great Britain or her colonies to practice there without further examination.

Colonial Doctors in the Imperial Service.

Legislation is being procured at the present session of the Imperial Parliament which will qualify graduates of colonial colleges for appointment on the Royal Army Medical Staff. It was felt by many that an unjust slight was placed upon colonial medical officers during the South African campaign in this matter.

When Did They Happen?

Several deaths among children in Toronto, Canada, have been traced to eating ice-cream which had been re-frozen.—*The Medicus*.

PERSONAL.

Dr. J. F. W. Ross has returned to Toronto after a two months holiday in the West Indies.

Dr. Samuel Lavine (Trinity '99) is opening an office on John street, Toronto.

Dr. Harry Watson (Trinity '97) is assistant surgeon with the American forces at Manilla.

We are pleased to learn that Dr. Price Brown, of Carlton street, has returned from the south greatly improved in health.

Dr. Nattress, we are glad to know, has returned from The Welland, St. Catharines, much improved in health.

Dr. W. T. Rush (Trinity '97) has returned to Toronto from mission work in British Columbia.

Dr. John M. Macdonald (Trin. '97) has been appointed associate coroner for the county of Halton.

Dr. G. A. Peters has been given command of the new corps of Mounted Infantry being raised in Toronto, with the rank of major.

Drs. A. H. Wright, W. P. Caven and Crawford Scadding sail for Europe in April, where they will spend some months.

Dr. Hugh A. McCallum, of London, Ont., has passed the examinations for the M. R. C. P. of London.

The engagement of Dr. Victor McWilliams, of Peterborough, to Miss Sheppard, daughter of O. B. Sheppard, Esq., of Toronto, is announced.

Dr. F. S. Pope (Trin. '98) of Victoria, B. C., is doing past graduate work in London, England; as also is Dr. A. R. Perry (Trin. '97).

Dr. D. A. McGillvray has returned from Europe and will take Dr. Fotheringham's practice during his absence in England.

Dr. Wm. McCallum, of Jarvis street, will have the sympathy of the profession in the death of his brother from appendicitis.

Dr. Fotheringham sails for England in a few weeks, where he will devote his attention to diseases of the skin and nervous system for some months.

Dr D. M. Anderson (Trin. '98) for the past two and a half years surgeon on the "Empress of India," has returned to Toronto after a trip to Australia, South Africa and England.

Dr. G. B. Smith, of College St., Toronto, will have the deepest sympathy of the profession in the death of his wife on Mar. 17th, after a short illness.

Dr. T. H. Prust (Trin. '99) of Eastern Mich., was married on March 20th to Miss Vina Belleghem, daughter of D. Belleghem, Esq., of Peterboro'. THE LANCET offers congratulations.

Dr. E. C. Ashton (Trinity '98), formerly house surgeon in the Hospital for Sick Children and afterwards medical superintendent of the Gravenhurst Sanitarium, is beginning practice in Brantford.

Dr. G. Sterling Ryerson is to be congratulated on being one of the new Knights of Grace of the Order of St. John of Jerusalem, an honor conferred at the same time upon Mr. Frederick Treves and Mr. A. D. Fripp.

Capt. Frederick Fenton, A.M.S., has just completed a course of ten lectures to No. 4 Bearer Company. Under the popular commanding officer, Major Fotheringham, this unit is one of the smartest and most admired in the Toronto garrison.

Dr. Robert Kippen, of St. Thomas, was recently bequeathed \$78,000 by a grateful patient in Sault Ste. Marie, who died a short time ago. The doctor had attended her free of charge in the days of her poverty, and in prosperity she did not forget his kindness.

OBITUARY.

Dr. C. E. Martin.

We regret to announce the death at Whatcom, Washington Territory, on March 11th, of Dr. C. E. Martin of Toronto. Dr. Martin was 69 years of age at the time of his death. He was a graduate of the Rolph School of Medicine, began practice in Lindsay, afterwards removed to Oshawa and finally took up his residence in Toronto some 25 years ago, where he continued in active practice until a few months ago. During the American war Dr. Martin served in General Sheridan's cavalry. The deceased was well known and highly esteemed by both the public and the profession in Toron'o who will deeply regret his death. He was a Liberal in politics and a member of the Anglican church. Two sons, graduates of Trinity Medical College, are practicing in the western States and Mrs. (Dr.) Norman Allan, of Toronto, is a daughter.

Mr William R. Warner.

It is with feelings of profound sorrow that we announce the death of Mr. William R. Warner, which occurred on the morning of Wednesday, April the 3rd, 1901. His business career, covering a half century, was not only long, but honorable, and his impulses as a man were kindly and generous. We feel that his loss will be shared by all who came in contact with him in either trade or social circles.

CORRESPONDENCE.

Toronto, March, 1901.

DEAR SIR,—I beg to announce that I have just returned from the United States where I have been perfecting myself in the science of correcting visual defects with glasses.

I have studied under some of the most efficient masters of this science in New York, Philadelphia, Boston and Detroit.

I have fitted my apartments with the most modern appliances for detecting and measuring defects of sight.

I make no charge for consultation.

I recommend glasses only when absolutely beneficial.

I guarantee my fitting to be satisfactory in every particular, and prices reasonable. Trusting I may have a share of your patronage.

DEAR MR. EDITOR,—Perhaps you may think it worth your while to comment upon the amazing thickness of the skin of the gentleman who returns from the land of freedom from the exigencies of professional decency, and "circularizes" us as above. The rampant commercialism which announces that his professional training is of no value and therefore is given free, has as its necessary corollary the next announcement in his precious circular that he will not sell glasses when they are not

needed. This is on a par with the notice which calls upon men of breeding not to expectorate upon the parlor carpet.

The only way by which the optician, fully fledged after a two weeks' course, can be met, is by imposing a similar course upon all students in medicine, a very slight addition to the present curriculum, and one which would at once retain such work in medical hands, and give the public much better service. I would suggest that the Council make this a part of the course in the 5th year of study now exacted.

Yours faithfully,

J. T. FOTHERINGHAM.

BOOK REVIEWS.

THE JOHNS HOPKINS HOSPITAL REPORTS, VOLUME VIII. NOS. 3-9.

The volume deals with typhoid fever in its various phases, and is a compilation of valuable monographs, containing elaborate statistics and observations on many new points.

The surgical treatment of perforating typhoid ulcer is taken up by Drs. Finney and Cushing. I. Dr. Finney gives an historical review of the operation, classifies 112 cases collected from literature, with his own cases, gives valuable hints as to signs of perforation, indications for operation, technique, the value of blood examination as an aid in diagnosis, etc.

II. Dr. Cushing records 3 cases operated upon by himself and refers to the same points as to signs, etc., as in the former paper.

III. Dr. Simon Flexner's article on "Unusual Forms of Infection in typhoid fever," and "Typhoid Fever without Intestinal Lesions," is exhaustive and most valuable.

IV. Dr. I. P. Lyon, takes up the subject of coincident typhoid and malarial infection.

V. Dr. J. F. Mitchell records 8 cases of oesophageal complications, some from literature, others from personal observations. The paper treats of oesophagitis, ulcer, stricture, with symptoms and pathological anatomy.

VI. Haemorrhagic typhoid by Dr. L. S. Hambruger.

VII. Puerperal infection with bacillus typhosus by Dr. George Dobbin, is an historical review and report of a carefully studied case.

VIII. Gall-bladder complications, by Dr. Charles Camac, includes cholecystitis, cholelithiasis and such conditions

IX. Dr. Osler, hemiplegia in typhoid, with record of 4 cases.

X. Hepatic complications by Dr. Osler, includes a comprehensive review of such conditions as, (a) focal necroses as described by Reed, (b) 6 cases of jaundice arising from catarrhal states, toxic abscess, gall-stones, cholangitis and pylephlebitis, (c) abscess.

XI. The results of Widal's reaction are reviewed by Dr. Norman Gwyn. In 265 cases of typhoid positive reactions were obtained in 99.6%. A short article is given by the same writer on the "Disinfection of infected typhoid urine."

XII. A case of early oculo motor paresis in typhoid fever is reported by Dr. Charles P. Emerson.

XIII. Dr. Hugh H. Young's paper on chronic cystitis due to the typhoid bacillus is something new and instructive.

XIV. Dr. Osler gives a summary of the cases of typhoid under observation from 1889 to 1899. This is most complete and exhaustive.

XV. The special features, symptoms and complications taken up in the same manner are embodied in another article.

XVI. The last paper is on "Observations on the blood in typhoid fever." The technique is described at length. The blood of uncomplicated cases is first dealt with and later the blood changes occurring with the advent of complications.

Such a series of carefully recorded observations is a valuable contribution to medical literature.

H. C. P.

A SYSTEM OF PRACTICAL THERAPEUTICS.

By Eminent American and Foreign Authorities. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Jefferson Medical College; Physician to Jefferson College Hospital, etc. Philadelphia. New (2nd) edition thoroughly revised. In three very handsome octavo volumes, containing 2593 pages, with 427 engravings and 26 full-page colored plates. Per volume, cloth \$5.00, net; leather, \$6.00, net; half morocco, \$7.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Volume II of Hare's system of Practical Therapeutics deals with the treatment of fevers and of diseases of the respiratory, circulatory, digestive, renal and nervous systems and of the skin. The opening chapter on typhoid fever is contributed by the editor, Dr. Hare. The author clearly outlines the power possessed by the physician in dealing with the disease, and its limitations and then proceeds to discuss prophylaxis and the treatment to be adopted in guiding the patient through his illness. Dr. Hare does not think that antityphoid inoculations are likely to give results at all comparable to those obtained in vaccination for smallpox—an opinion with which most authorities will agree. In discussing therapeutic measures in general he gives a qualified approval of the cold bath in selected cases but condemns the use of the coal tar antipyretics. Altogether the chapter deals with the matter under discussion in the most careful and conservative manner and represents the safest teaching at the present day.

Dr. J. M. Anders writes a very satisfactory chapter on the treatment of malarial fevers.

Acute tonsillitis, influenza and acute articular rheumatism are dealt with by Dr. F. A. Packard in three unpretentious chapters. In a system of therapeutics we think the use of guaiacum in acute tonsillitis might have been mentioned.

In discussing the treatment of diphtheria Dr. Floyd M. Crandall strongly approves of antitoxin. The same author deals very satisfactorily with spasmodic croup and rickets and diseases of the mucous membrane of the mouth.

The articles croupus and catarrhal pneumonia are contributed by the editor and are up to the high standard one would expect.

Diseases of the heart and vessels are dealt with by Dr. W. H. Thompson of New York, Dr. F. C. Shattuck, of Boston and Sir Lauder Brunton, authorities well qualified for the task, which has been satisfactorily performed. We can scarcely agree with Dr. Thompson that digitalis can only benefit the heart as a nervine and is therefore a temporary makeshift. By stimulating muscular contraction and thus filling the coronary vessels better it must improve the nutrition of the heart muscle. Dr. Thomas G. Ashton contributes the chapters on diseases of the stomach. The articles are excellent, though possibly too short to be exhaustive.

A most complete practical and altogether commendable chapter is that by Dr. Wharton Sinkler on headaches and neuralgia.

Dr. J. H. Musser contributes the article on diseases of the liver and spleen. Dr. N. S. Davis those on diseases of the kidney. The treatment of diseases of the nervous system, including insanity is fully discussed by Allen M. Starr, Chas. K. Mills, F. H. Dereum, H. M. Bannister, Joseph Collins, Ed. N. Brush, and Hugh T. Patrick and the volume concludes with a number of short, concise, but thoroughly satisfactory monographs on the treatment of skin diseases by Henry N. Stelwagon.

A perusal of this volume discloses much for praise and little for adverse criticism. The various articles are concise, practical and up to date and represent the best teaching and practice of the present day. The volume will be found most satisfactory and no medical library should be without it.—H. B. A.

Clinical Examination of the Urine and Urinary Diagnosis. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. Bergen Ogden, M.D., Instructor in Chemistry, Harvard Medical School; Assistant in Clinical Pathology, Boston City Hospital; Medical Chemist to the Carney Hospital; Visiting Chemist to the Long Island Hospital, Boston. 416 pages Illustrated. Philadelphia, W. B. Saunders & Company, 1900. Canadian Agents, J. A. Carveth & Co., Toronto, Ont. Price \$3.00.

This work presents in a clear and concise manner the chemistry of the urine, giving detailed methods of analysis, both qualitative and quantitative. Many illustrations and a number of colored plates are introduced, showing normal and abnormal ingredients of urine.

The latter half of the work is devoted to the diagnosis of disturbances and diseases of the kidneys and urinary passages. The clinical symptoms of each disease is given in brief with the peculiarities of the urine in each affection and also in certain general diseases of the body.

The colored plates and illustrations are beautifully executed and add much to the value and appearance of the book. The text, paper and binding are creditable to the publishers. From a chemical standpoint this publication is wonderfully complete in detail and a careful perusal of its pages shows that all the standard authorities on the subject have been freely drawn upon and all recent methods of examination of urine have been embodied in this volume.

We can recommend the work to the student of medicine as a full and concise treatise on the clinical examination of urine. To the busy practitioner, who has neither the time nor opportunity to consult the literature on medical and surgical diseases of the urinary organs, this work will prove invaluable.—C. B. S.

SAUNDERS' MEDICAL HAND-ATLASES

Atlas and Epitome of Diseases Caused by Accidents. By Dr. Ed. Golebiewski, of Berlin. Translated and edited with additions by Pearce Bailey, M.D., Attending Physician to the Department of Corrections and to the Almshouse and Incurable Hospitals, New York. With 40 colored plates, 143 text-illustrations, and 600 pages of text. Cloth, \$4.00 net. W. B. Saunders & Co., Philadelphia. J. A. Carveth & Co., Toronto, Canadian agents.

This work contains the first systematic description ever published of the injuries produced by accident and the consequences and sequels resulting therefrom. It represents a full and scientific treatment of the subject of accident injury; the functional disability caused thereby; the medico-legal questions involved, and the amount of indemnity justified in given cases. The text of the book is extremely complete, especially in its descriptions of functional disorders. The subject lends itself particularly well to illustration, and the illustrations have been chosen with discrimination and executed with skill. The beautiful lithographic plates are models of artistic and lifelike representation. The subject is one of the utmost importance in these days of expert evidence in personal injury cases.

The work is indispensable to every physician who sees cases of injury due to accidents, to advanced students, to surgeons, and on account of its illustrations and statistical data, it is none the less useful to accident insurance organizations. Canadian agents, J. A. Carveth & Co., Toronto, Ont.—G. A. B.

ENCYCLOPAEDIA MEDICA.—VOL II,—BRACHIAL PLEXUS TO DIGESTION.

Under the general Editorship of Chalmers Watson, M.B. Published by Wm. Green & Sons, Edinburgh. Canadian Agents, J. A. Carveth & Co., Toronto, Ont. Price \$5.00 per volume.

In the second volume, the excellencies which characterized the first volume are fully maintained. The articles on Burns, Climate, Cornea,

Digestion and Metabolism are especially to be commended. The brain is treated in a series of five articles contributed by Bruce, Taylor, Rissien Russell, Fleming and Cotterill. In all some fifty-six subjects received treatment. Among the more important writers in these being Saundby, Habershon, Mansell Monllin, Julu and Allingham.

The work is certainly up-to-date, and of good value. The articles are not too long. The treatment which each subject receives is original, and such as makes it appear before the reader as something entirely new and fresh. This is the best encyclopædia in the market.—D. J. G. W.

SAUNDER'S MEDICAL HAND ATLAS SERIES.

An authorized translation from the German of the revised and enlarged edition of the atlas and epitome of Gynecology by Dr. Oskar Schöffer, obstetrician and gynecologist, in the University of Heidelberg, and edited by Richard C. Norris, A.M., M.D., of Philadelphia, with 90 colored plates, 65 text illustrations and 308 pages of text; price \$3.50. W. B. Saunders & Co., Philadelphia and New York.

The water color plates are really excellent, the artistic effects striking and the representations true. The clinical notes explanatory of the drawings are concise and the suggestions as to treatment are good. The method of teaching by appealing to the eye as well as to the ear is most valuable and is of the greatest assistance to the student in acquiring a minute and easy grasp of the conditions described. The drawings illustrating the different normal positions of the uterus, as well as those showing the presence of abnormal growths in the pelvis, are especially instructive. The book on the whole is a valuable one.

The Canadian agents are J. A. Carveth & Co. Toronto.—D. G. G.

FRACTURES.

Carl Beck, Surgeon to St. Mark's Hospital and the New York German Poliklink, 255 pages and 70 illustrations. Price \$3.50. W. B. Saunders & Co., 1900, Philadelphia. J. A. Carveth & Co., Toronto.

There are but few works that deal exclusively with fractures. The present one combines excellent arrangement with the latest usefulness of Röntgen rays in such cases. By practically exposing the fracture to view, it enables the surgeon to verify or not his anatomical opinion in any given case. The old difficulty of wrestling with an obscure fracture in the vicinity of a large joint, endeavoring to determine whether there was fracture alone or fracture-dislocation is done away with in a large measure. Many excellent photographs illustrate special points in this connection. Recognizing that after all this is but an aid and corrective to the right appreciation of the diagnosis and treatment of fractures—the author in this work very clearly and systematically deals in two parts with the subject. In the first, "Fractures in General," and in the second, "Fractures of Special Regions." We like the style of the whole work and its

general get-up. It is not over-burdened with details, yet the descriptions are sufficiently clear, the plates are good, the printing unusually clear and easy to read. It is well worthy of a place in medical libraries.

F. Le. M. G.

A TEXT BOOK ON PRACTICAL OBSTETRICS.

By Egbert H. Grandin, M.D., New York, Gynecologist to the Columbus Hospital, and George W. Jarmin, M.D., Instructor in Gynecology in Columbia University, is just entering upon its third edition, "revised and enlarged." F. A. Davis & Co., Philadelphia.

This is a book of 500 pages, tastefully gotten up, with a very attractive external appearance. The print is plain and easily read. The plates are particularly good and instructive, especially those in Part II. These are artistic in character and of great assistance to the student in understanding the text.

The work is preeminently a "practical" one, and while it avoids the mistake of leading its readers into a maze by too voluminous descriptions, it perhaps goes to the other extreme of condensing over much, especially the theoretical side, thus making the book a little more difficult to read.

Chapter IV., "The Diagnosis of the Presentation and of the Position of the Fœtus" is especially good and shows evidence of being carefully prepared; likewise chapters VII and X. "The management of normal and abnormal Labor," and the "Pathological Puerperium." The teachings on the whole as to treatment are safe, and the book an excellent one and should be of the greatest value to the practitioner, as well as to the student.—D. G. G.

THE INTERNATIONAL TEXT-BOOK OF SURGERY.

By American and British Authors. Edited by J. Collens Warren, M.D., LL.D., Professor of Surgery at Harvard Medical School, Surgeon to the General Hospital, Massachusetts, and A. Pearce Gould, M.S., F.R.C.S., Surgeon to Middlesex Hospital, etc. In two volumes Cloth, \$5; sheep or half Morocco, \$6. W. B. Saunders & Co., Philadelphia. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

The second volume of this new work on surgery is now before us. This volume, devoted to regional surgery, confirms still more thoroughly the wisdom of the editors as shown in the former volume. With its 471 illustrations and eight full page plates in colors, in addition to its splendid text, the subject is made very plain and is presented in a highly practical way. The conciseness of the text is very marked, nothing being admitted for the sake of "padding." Where there is so much that is really excellent, it is perhaps unwise to particularize, but the chapters on "The Diagnosis of Abdominal Diseases," by Mayo Robson, is in our estimation one of the very best things that has been written on the subject.

W. B. Saunders & Company (Philadelphia), are certainly to be congratulated upon the general appearance of the volume.—GEO. A. B.

PUBLISHERS' DEPARTMENT.

FEMALE NEUROTICS—THEIR TREATMENT.

Prof. Chas. J. Vaughan, Chair of Gynaecology, Atlanta College of Physicians and Surgeons, writes: "Cerebro-nervous affections peculiar to women associated with pathological disturbances of the reproductive organs are legion, and most trying to physician and patient. Physicians are aware of the wide prevalence of these nervous disorders, for comparatively few women are entirely free from some phase of the ailment. Neurasthenia, neuralgia and other manifestations, either of an active or passive character, are common and are always peculiarly rebellious to treatment. Neuralgia constitutes the great cause of danger from the employment of hypnotics and narcotics, which only afford relief by numbing, but effect no cure. On the other hand, the formation of a drug habit rather aggravates the condition from which relief was originally sought. I have found nothing so well suited to these cases as five-grain antikamnia tablets, administered in doses of from one to three tablets and repeated every one, two or three hours according to the attendant's judgment. These tablets not only afford complete relief without fostering a drug habit, but they do not endanger weakened hearts. Their exhibition is attended with no unpleasant after effects. I use them in preference to any other preparation in the treatment of female neurotics and experience demonstrates that they are safest and best."

DECEIVING THE PALATE.

In a recent issue of a medical journal appeared the following item:—
"A somewhat clever ruse, practised for the purpose of administering cod-liver oil to those who object to it, is described as breaking up a conspiracy among the patient's olfactory, optic, and pneumo-gastric nerves. The patient probably confesses he likes sardines so without his becoming aware of the trick, the preservative cotton-seed oil is emptied away and the sardine box is filled with fresh cod-liver oil, of which every day the patient unconsciously takes a substantial amount."

About the same time that the above appeared in print another authority vouchsafed the information that "a ferruginous water, prepared by keeping a few iron nails in contact with water for a few days, serves to fully prevent the odor and taste of cod-liver oil from being noticed. The mouth is to be rinsed with the water both before and after taking the oil."

* These articles take one back to the days of the stage-coach, the hand-press, the tread-mill and the spinning-wheel, and the conviction is forced home that many people do not progress with the age in which they live. Physicians of the modern school have come to the realization that plain cod-liver oil is too violent in its action to be safely administered to patients whose stomachs are in a weakened condition. But in order that the full strength of cod-liver oil may be secured, and at the same time additional benefits derived from other valuable bone-building and blood-enriching properties, the careful practitioner prescribes Scott's Emulsion of cod-liver oil. He gives this the preference over all others because during the twenty-six years of its existence it has proved invaluable in the treatment of all cases requiring cod-liver oil combined with hypophosphites of lime and soda and glycerine. It is not necessary to resort to such subterfuges as above cited in order to get the emulsion into the system. Grown folks take it without the slightest hesitancy, while children, however young, become really fond of Scott's Emulsion.

THE CANADA LANCET

VOL. XXXIV.

TORONTO, MAY, 1901.

No. 8.

ORIGINAL ARTICLES.

FILARIAE AND FILARIASIS.*

By J. H. ELLIOT, M.B. (Tor.)

Medical Supt. Muskoka College Sanitarium.

The subject of filariæ and filariasis is of great interest, as well as of importance to a practitioner in the tropics. In the more temperate lands it is perhaps of only passing interest as cases are rarely seen, and then only in those who have lived for some years in an endemic area.

Although of so frequent occurrence in the tropics, our knowledge of the human filariæ is still rather fragmentary, and much work still remains to be done. With the exception of one species, *F. nocturna*, the pathological significance of those inhabiting the blood and lymph channels is quite unknown.

Under the term *Filaria sanguinis hominis* are included three, possibly four or five, species of nematode worms.

1. *Filaria Bancrofti*—the embryos of which are known as *Filaria nocturna*.

2. *Filaria perstans*.

3. *Filaria Ozzardi* (provisional) Manson.

Others which have been described are known only in the adult or embryo condition. Their life history in the human being still remains to be worked out. These include *F. diurna* and *F. Demarquain*.

Filaria Bancrofti has a very wide distribution, being found in almost all tropical countries. In America it is found as far north as Charleston. It is found in Southern Europe, Tropical Africa, India, China and Australia.

The embryo form, *filaria nocturna*, was discovered by Demarquay at Paris in 1863, in the fluid from a case of chylous dropsy of the tunica vaginalis. Later it was found in chylous urine by Wucherer at Bahia in 1866. Lewis in India first described them in the circulating blood.

The parent filariæ are hair-like, opalescent nematodes, about three to four inches long. They are usually found male and female together. Their habitat is some part of the lymph system, either in the distal lymphatics, a lymphatic varix, or the larger vessels between the glands. If

*Read before the Toronto Medical Society March 21st, 1901

in a varix they are free to move about, but when in the distal lymphatics it is more usual to find them coiled up in small cyst-like dilatations. When set free, and placed in water or salt solution they move about very freely, coiling and uncoiling themselves very rapidly, often apparently getting themselves into an inextricable tangle.

The adult male is about 70 m.m. long, very slender, and shows a greater tendency than the female to curl when in water or salt solution. The oral end is slightly tapered and club shaped. The tail end also tapers, the tip being rounded off abruptly.

The female filaria is the larger, both in diameter and length. The anterior and posterior extremities are similar to the male. The two uterine tubes occupy the greater part of the whole length of the body, and are seen to contain numberless ova in various stages of development while near the external opening the embryos can be seen in the fresh condition, actually moving about.

The embryos which are found in the circulating blood are minute, colorless, snake-like worms, about 1-80 inch in length, 1-3200 inch in diameter. Each is enclosed in an exceedingly delicate sheath considerably longer than the worm it encloses. It moves freely backwards and forwards in this, the part not occupied collapsing, and trailing about after the head or tail as the case may be. The head end is abruptly rounded; under a high power there can be seen, when the movements of the animal have about ceased, a six lipped, prepuce-like structure which is constantly covering and uncovering the end of the worm. Occasionally a short, sharp, fang-like projection is momentarily shot out, and quickly retracted.

In fresh drawn blood the movements of the worm are very rapid, and it is impossible to make out any structure beyond the sheath. The little animal is constantly moving backwards and forwards within its sheath, and violently lashing about. The corpuscles near it are much agitated by the continual movements of the embryo. Wriggling about so actively the embryo does not as a rule move very far from the one place, and soon has a place about it quite clear of corpuscles; but occasionally it will insinuate itself amongst the corpuscles and move away from the field.

All that are seen are of the same size; they undergo no further development until they are taken up by their intermediate host, the mosquito. The number of embryos found in a drop of blood will vary according to the time of day the examination is made. As a rule a preparation made during the day will give a negative result, or not more than an occasional specimen. As evening approaches the embryos begin to enter the peripheral circulation, and their numbers gradually increase until midnight, after which they gradually decrease until seven or eight o'clock, after which none are to be found until evening again.

The number found in each drop at midnight will vary from ten to twelve to as many as five or six hundred, depending no doubt on the number of females, and upon whether they are reproducing at that time. Assuming that the parasites are equally distributed throughout the circulation there may be as many as forty or fifty millions circulating at one time.

This phenomenon of diurnal periodicity is maintained for years with the utmost regularity. It may be disturbed by causing the patient to sleep during the day, and remain awake during the night, when the embryos will be found in the peripheral circulation during the day, and absent during the night.

When absent from the peripheral circulation they are to be found principally in the lungs and larger arteries. At a post mortem examination made by Manson on a case dying suddenly in the morning from poison, and in which the filariae were always absent from the peripheral circulation during the day, he found that while blood from the liver and spleen showed an average of only one embryo to each drop, preparations from the lung and carotid artery showed over six hundred to each.

No satisfactory explanation of this phenomenon of "periodicity" is as yet forthcoming; possibly it is an adaptation to the nocturnal habits of the mosquito, but even if so why should they retire into the larger vessels and lungs during the day? What the average length of life of each embryo in the blood stream may be, or what finally becomes of the millions which are constantly being produced we do not know. Only a very small portion of them are taken up by suctorial insects, the rest must necessarily be disposed of within the human host.

The intermediate host of the *Filaria Bancrofti* is the mosquito; both *Culex* and *Anopheles* have been shown to be favorable to the further development of the embryos. It cannot yet be said that all mosquitos may act as intermediate hosts although members of each genus have been used in experimental work with successful results.

If the stomach contents of a mosquito be examined after feeding on a filaria infested patient, the embryo will be found in greater numbers than an examination of the patient's blood would lead one to expect. Apparently the mosquito or the embryo has a selective action—there is an affinity somewhere, possibly exerted by the filaria on the proboscis of the insect within the vessels.

Within the insect's stomach the movements of the young filaria become very active. It soon leaves the stomach, and finds its way amongst the thoracic muscles where it moves about slowly.

If one mosquito be dissected daily from a hatch which were fed simultaneously on a patient the further development can be satisfactorily studied. The metamorphosis is completed in a period varying from fifteen to thirty or more days. At the end of this time a mouth is formed, the alimentary canal may be distinguished, and the young parasite has grown from 1-80 inch to 1-16 or even 1-4 inch in length. At this stage they may be found crowded forward at the base of the proboscis, and underneath the cephalic ganglia. From here they push forward along the proboscis, and may be found lying free amongst the stiletts.

How the parasite regains its human host is again undecided. From the fact that at the completion of its metamorphosis in the mosquito it passes out along the proboscis, is strongly suggestive that it is carried to the human being when the insect next takes a feed of blood, but this is only conjecture. Manson's first theory was that the parasites are set free in water upon the death of the mosquito, and that they reach the stom-

ach in drinking water, and nothing has yet been adduced to prove that this may not be so.

However the filariae may be introduced into man, they finally reach the lymphatics, attain sexual maturity, and after fecundation a new generation of embryos is set free, which again appear in the circulation.

The degree of prevalence of filariasis varies a great deal in the different endemic areas. In British Guiana and some of the islands of the West Indies from five to twenty-five per cent. of the native population show filariae in the blood. In some of the islands of the South Pacific nearly 40 per cent. show infection, while in parts of West Africa, twenty-five to fifty per cent. of the adult male population carry the parasites, though here *F. diurna* and *F. perstans* are also found, and account for a large proportion of these cases.

By far the greater portion of those who harbor the parasites do so without any inconvenience, and without any symptoms arising from their presence. The young filariae circulating in the blood apparently set up no trouble whatever, any pathological conditions which develop are always traceable to either the parent worm, or to the ova prematurely discharged. The ova are much larger in diameter than the free embryos, and if set free in large numbers will very effectually block the lymphatics.

Broadly speaking there are two varieties of disease brought about by the filaria—the one in which there is a marked varicosity of the lymphatics, the other characterized by an oedematous condition which tends to become to a certain extent organized and solid resulting in elephantiasis.

As a result of a lymphatic vessel becoming blocked by one or more worms or a number of ova, a thrombus may be formed, or an inflammation set up in the walls of the vessel with subsequent thickening. From this occlusion, partial or complete, there is a resulting varicosity of the vessels towards the area drained with or without oedema. With inflammation recurring in this area of lymphatic congestion there is produced a thickening of the tissues, and sooner or later a condition of elephantiasis results.

When the thoracic duct is the seat of obstruction there is as a consequence an enormous dilatation of the abdominal, and pelvic lymphatics, and a huge varix from 8 to 10 inches in diameter, and several inches thick may be found, behind which the kidneys and bladder are effectually concealed.

If the lymphatics of the bladder or kidney rupture, chyluria supervenes. If the lymphatics of the scrotum are involved lymph scrotum results.

Acute attacks of lymphangitis are very common in filarial disease. There is a painful swelling of the vessels or glands affected, with as a rule a red line on the skin over the affected area, this inflammation spreads, may become erysipelatoid in character, and a rigor followed by a high fever supervenes. The attack may continue for two or three days with headache, vomiting and even delirium. Finally a general diaphoresis sets in, and the swelling gradually subsides, leaving some

permanent thickening. These attacks may recur at varying intervals of weeks, months or years, and are often mistaken for malarial fever, occurring as they do in districts where malaria is almost always prevalent.

Elephantiasis is perhaps the most frequent pathological condition set up by filarial infection. In Samoa over 50 per cent. of the adult male population is affected. In most tropical countries it is not of so frequent occurrence, but is fairly common in all parts where the filaria *Bancrofti* is found.

In over 90 per cent. of the cases the lower limbs are involved, either one or both, or in conjunction with some other portion of the body. The scrotum is frequently involved, less often the mammae, vulva or localized portions of the arms, body or neck.

Chyluria, the result of the rupture of a varix on the walls of the bladder or about the kidneys is not a very serious condition, though it as a rule causes the patient a great deal of mental worry. It very frequently appears without any warning, though it may have been preceded by pain or aching in the loins and pelvis from the distension of the varix. The urine may be white, pink or even red, during a part of the day it may be quite normal; it coagulates or stands. The general health of the patient is not affected, and about the only inconvenience is the pain attendant upon the passage of clots which may form in the bladder. Occasionally these may cause retention.

Other forms of disease associated with this filaria are varicose glands of the groin and axilla, lymph scrotum, orchitis, chylous ascites, and chylous diarrhoea.

F. perstans.—This parasite has so far been found principally on the West Coast of Africa from Lagos to the Congo, and in Demerara. As the name indicates it has not a periodicity as has *F. nocturna*, but may be found in the blood at any time.

The infection is not as great as in *F. nocturna*, the average drop of blood not showing more than perhaps one to ten embryos. Indeed in some cases several drops may be examined before one is found.

The embryos are much smaller than *F. nocturna*, measuring only $\frac{1}{125}$ inch in length. The worm narrows gradually from the anterior third to the tail, ending abruptly in a rounded, not pointed, extremity. It is devoid of a sheath. The head end, too, is distinctive; there is no hooked cephalic prepuce to be seen, but a retractile fang is easily observable, and is shot out and retracted at shorter intervals than the corresponding structure in *F. nocturna*. The movements of the embryo on the slide are very active, moving very rapidly across the field with a quick, snake-like movement, and travelling freely all through the preparation.

The parental forms were discovered by Daniels. They are slightly shorter than *F. Bancrofti*. The tail is distinctive, being incurvated with a slight notch in the chitinous covered tip.

Only a few adults have as yet been found. Their habitat has been the connective tissues at the root of the mesentery, behind the abdominal aorta, and beneath the pericardium.

No definite pathological lesions have been found associated with this parasite. Manson has conjectured it is the cause of the sleeping sickness

of the Congo natives, partly from its presence in three cases of the disease, which he has seen in England, and the fact that the geographical distribution of the parasite and the disease are somewhat similar.

Against this is the epidemic character of the disease, and the fact that *F. perstans* is present in a large percentage of the population in districts—*e. g.*, the Niger Delta and the Oil Rivers—where the sleeping sickness is unknown.

F. Ozzardi.—This is the name given provisionally by Manson to a filaria occurring in the aboriginal Carib Indians of the hinterland of British Guiana, it is often associated with *F. perstans*. The embryos are similar to *F. perstans* in size and movement, but possess a pointed tail.

The adult worms in size and structure closely resemble *F. Bancrofti* except as regards the tail which is bulbous.

F. diurna.—The parental form of this species has not as yet been described. The embryos to which this name has been given are not to be distinguished morphologically either in fresh or permanent preparations from *F. nocturna*.

The distinction is in their periodicity. Instead of at night, it is during the day with a maximum about eleven to one o'clock that they are found in the peripheral blood. Their distribution is limited to certain parts of the West Coast of Africa.

Whether they are identical with *F. nocturna*, and the variation in periodicity is due to some influence acting on the embryo, can only be satisfactorily settled by the discovery of the parent worm. We know from the experiments of Stephen Mackenzie that the periodicity of *F. nocturna* may be changed by causing the patient to be up at night, and to sleep in the day time. The average West African native is so prone to sleep during the hot part of the day, and to be up doing his canoeing during the night or to be dancing until the morning, especially at the full of the moon, that it would be very easy to reconcile the facts and explain them on this basis.

The observations made by "The Liverpool Malaria Expedition to Nigeria" upon an extensive series of cases will soon be published. As a member of that expedition I had the opportunity of seeing a great many cases of *F. nocturna*, *F. diurna* and *F. perstans*. In many of the natives there was double infection, and in a few cases the three forms were present.

The table of periodicity of *F. nocturna* and *F. diurna* does not show the restriction to the fixed hours which is usually supposed to exist. In some cases it was difficult to say whether the embryos found should be called diurna or nocturna. From clinical observation we were much inclined to regard them as identical but on attempting to study their metamorphosis in *Anopheles claviger* we were unable on two different occasions to find any of the *F. diurna* within the body of the mosquito; all were apparently excreted with the undigested food, while *F. nocturna* underwent the usual changes, and was found in the proboscis on the 15th day. On account of our work on malaria we were compelled to drop the subject at this interesting point and were unable to return to it.

Unfortunately we had no opportunity of a post mortem examination

on any of the cases, and consequently were unable to compare the parent forms.

F. Magalhãesi.—This name has been applied to two adult worms, male and female, described by Prof. Magalhães, found in the left ventricle of the heart of a child that died in Rio de Janeiro.

The female measured 155 m.m. in length by 0.7 m.m. in diameter; both were cylindrical, and of uniform thickness with exception of the club shaped anterior extremity, and the tapering tail.

No other similar worms have been described, and nothing is known of the life history, or of the pathology.

Filariae inhabiting the connective tissue.

F. Medinensis, the guinea worm, plays a rather important part in tropical pathology. It occurs in Persia, Arabia, parts of India, and in tropical Africa. In certain parts of the West Coast it is very prevalent, especially so among the Yoruba tribes, where nearly half the inhabitants in many of their villages are afflicted with the parasite. It is not unusual to find several guinea worms in the same individual. I have seen a boy of ten, the son of a Yoruba soldier, with two in each foot, and another patient with two in each foot and one in the buttock. As many as thirty have been reported in one person.

Only the female is known. The length varies from one to four feet, the average being 30 to 36 inches. The diameter is about 1-10 inch. The body is opalescent, almost milky white, devoid of markings, ending abruptly in a sharp pointed tail which is bent at an angle to the body. The mouth is surrounded by six papillæ, two large and four small. There is no opening at the posterior end of the alimentary canal. The enormously distended uterus with its millions of ova and embryos is also cæcal, the vagina being entirely obliterated, probably from pressure.

This immense worm inhabits the subcutaneous and intermuscular connective tissues. When mature she moves towards the lower extremities, pushing forward until she is underneath the epidermis; soon after she reaches here a small bulla forms over her head, and on the rupture of this, an ulcer is seen, in the centre of which is a small opening. On the first occasion that the ulcer comes in contact with water, either by the patient wading a stream, or by the application of water to the ulcer, the uterus is prolapsed through the mouth, is extended beyond the ulcer, and ruptures setting free a milky fluid which is found to contain myriads of embryos.

The embryos are about 1-30 inch in length. The head is somewhat tapered, and abruptly rounded; the tail is long and pointed; the body is striated transversely. They will live in clear water for a week, and in the water of a wayside pool two or three weeks.

The fact that the worm when ready to discharge her young travels as a rule to the leg, or foot, and that the embryos are expelled the moment there is contact with water, required for some time an explanation. This was afforded by the observations of Fedschenko in Turkestan, who found that the intermediate host was a small crustacean, *Cyclops quadricornis*, and we now see that the appearance of the worm in the foot and leg is but instinct for the preservation of her species, it being necessary that

she deposit her young in some pool which is the habitat of the cyclops, as her host is walking through it. No doubt the parasite is again conveyed to the human body through drinking the water containing the wected cyclops.

The treatment consists in tying a small piece of wood to the worm when extended, and winding out one to three or four inches daily. Care must be taken, as the breaking of the worm within the body is usually followed by inflammation, a cellulitis, and at times abscess and sloughing.

By frequent douching all the embryos will be extended in from 15 to 20 days, and then the worm may be more easily extracted, or is at times absorbed.

More recently a 1 in 1,000 solution of perchloride of mercury has been injected into the worm causing its death.

Filaria Loa.—This parasite is only known on the West Coast of Africa where in certain parts it is very common. It wanders about the connective tissues of the body. When in the subcutaneous tissue it causes itching and pricking sensations. Its course can be followed readily as it traverses the tissues near the surface. It is seen more often in the conjunctival tissues, and in the neighborhood of the eyes than elsewhere. Its length of life must be great as it has been seen in patients who have been at least ten years away from the West Coast.

The male is about 28 m. m. in length, by 0.3 m. m. in breadth; the female about 35 m. m. in length by 0.5 m. m. in breadth. Both are cylindrical, tapering at both ends, more marked at the tail.

The embryos have not been found in the body, unless, as has been thought, *F. diurna* is the embryo of this species. Those studied in utero, or which have been expelled after the removal of a loa from the eye are sheathed, and very similar in size to *F. diurna*. However this may be decided in the future the fact remains that the great majority of cases of *F. Loa*, though occurring in the same district in which *F. diurna* is found, do not show the latter in the blood. In Southern Nigeria where we found 20 to 25 percent. of the adults infected with *F. diurna* we saw but one case of *F. Loa*.

The treatment is removal when the worm is seen under the skin. It must be grasped by a pair of forceps, and held until an incision is made over it. The negroes usually place a small pinch of salt into the eye which successfully drives the parasite away or remove it with a sharp thorn.

DYSMENORRHOEA.*

By D. GILBERT GORDON, M.D., L.R.C.P. and S. (Edin.),
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Some of the most satisfactory moments that come to a physician in his professional life are those in which he has been able to relieve great pain; and on the other hand few bring to him more disappointment than when, after repeated effort, he fails so to do.

The suffering endured by woman during the performance of the function of menstruation is so general that we are all constantly meeting it. The temptation to prescribe such remedies as whiskey or morphine for this particular kind of pain is so strong that against our better judgment we allow their continued use. I do not desire to treat dysmenorrhœa as if it were a disease, for it is not; it is a symptom, and the causes of this symptom and its relief are the points to which I wish to direct the attention of this society. There has been much discussion both in the journals and in medical associations as to the classification of dysmenorrhœa. In speaking of the classification of a symptom it must almost necessarily mean the classifying the causes of the symptom, and on this account therefore there has been so much disagreement. Dr. Johnston, for example, claims that the classification should be entirely etiological, and in this while he is quite logical he is lead into an evident error in his classification. He would divide dysmenorrhœa into two classes, viz., one due to infection (inflammatory) and one due to structural changes. He distinctly states, and is supported by many, that there is no such thing as neurotic or neuralgic dysmenorrhœa, no such conditions as obstructive or membranous dysmenorrhœa. Now in this he has gone too far, for I am sure you will all agree with me that there are cases where there is no infection and no structural change and yet where there is intense dysmenorrhœa. There is such a condition as neuralgic dysmenorrhœa. We have all seen patients in whom the pain would completely disappear on an entire change of environment, perhaps to recur on a return to the old surroundings. What seems to me the most satisfactory classification is the old one taught by Thomas and Goodell and still adhered to by most of the American gynecologists and obstetricians, viz.: (a) Neuralgic, (b) Inflammatory, (c) Obstructive, (d) Membranous.

It is not to be expected that these can be clearly defined, in fact, they run together and overlap. For example a neuralgic condition will lead to menstrual disorders, and in time structural changes in the endometrium will take place when we have inflammatory or congestive causes of pain. While my experience leads me to believe that dysmenorrhœa due to mechanical causes, yet these causes may produce congestive changes certainly occurs. Just as an obstruction in the larynx would be followed by an inflammatory condition and the production of pain, so might obstruction in the cervix produce similar results. The

* Read before Toronto Medical Society.

etiology therefore is very complex. The treatment to be successful must be the treatment of the cause.

1. *Neuralgic dysmenorrhœa*.—While it is true that neuralgia is often a cloak to hide ignorance, and while it is easy to make this class a 'dumping ground for those cases which we are unable to explain, yet there are some that belong here. A woman may menstruate painlessly for a number of years, until perhaps she is over-worked or over-worried, may not be able to get her usual amount of outdoor exercise, and she begins to have pains during her periods, which gets worse and worse as time goes by. The pain comes on shortly before the flow and probably lasts for about twenty-four hours. If this woman is sent away for a holiday, she will probably be free from pain and remain free while she is away, and if she stays away a few months she will likely be free for some periods after her return. The results are different in the inflammatory variety. In this neuralgic type tonic treatment, good fresh air with exercise and good food will probably effect a cure. I wish to recommend in these cases, and in fact in most women's diseases, the wise use of the bicycle. I think the bicycle has done more to lessen the amount of fees paid to gynecologists than all drugs on the market put together. I would like to deprecate most strongly in these and similar cases of dysmenorrhœa the use of alcohol and sedatives, also the making vaginal examinations in the unmarried. It would be a most unfortunate thing if any patient suffering simply from neuralgic dysmenorrhœa were subjected to local treatment.

Inflammatory dysmenorrhœa.—Here as a rule a most careful physical examination will have to be made to ascertain exactly the condition of the parts. The inflammatory condition of diseased parts, those concerned in menstruation is the cause of the pain and the treatment must be directed to such. These cases are for the most part infective. The inflammatory condition may be secondary even though causing the pain. The removal of a submucous fibroid may completely cure the pain. The rectifying of a utero-displacement may produce a like effect. The treatment that will in most cases be required and which if carefully and thoroughly done will give most satisfactory results is a dilatation of the cervix, preferably under an anæsthetic, then a curettage followed by a packing with iodoform gauze. The packing should not be repeated but should be allowed to remain in place for three days.

If it is not considered advisable to do an operation, the use of the warm douche, the boroglyceride tampon, and the application to the endometrium of Churchhill's iodine or carbolic acid will often produce a cure although longer in bringing it about. My experience has been that dilatation as practised by Goodell or splitting or nicking the cervix as recommended by Marion Sims are very unsatisfactory by themselves, they furnish only a temporary relief.

The real cause of the pain may be in the ovary; here the results are much more unsatisfactory. The application of blisters or painting the vaginal vault with iodine or the use of hot douches may give relief. Of these I have found the hot douche used twice daily for half

an hour by far the most satisfactory. The water should not be used so warm as to be uncomfortable. These cases are generally sterile. If so and if it can be ascertained that one ovary is healthy, I would recommend the removal of the diseased ovary. This will probably cure both conditions. Should pregnancy occur in these conditions with or without a partial oöphorectomy it will probably result in cure. I would not, however, recommend marriage as a means of curing a patient a martyr to dysmenorrhœa of the inflammatory type, for I have found that the pain is much greater after marriage and often results in sorrow to both contracting parties.

Obstructive dysmenorrhœa.—I am inclined to think that the pain in menstruation due to this cause must exist very seldom. A deformed uterus may, however, produce inflammatory changes and this condition produce pain.

Membranous dysmenorrhœa.—This most interesting and rare condition I know nothing of personally for I have never seen a case. During the function of menstruation the mucous membrane of the uterus is stimulated and prepared to receive the fertilized ovum which is thrown upon its surface. Should, however, the ovum remain unfertilized the mucous membrane degenerates and is thrown off in shreds causing little or no pain. If this degeneration does not take place as is claimed by Dr. Williams, of London, then probably a degeneration takes place in the deeper tissues and the membrane *in toto* is exfoliated and the expulsion causes extreme pain. It seems to me likely that in this case too the pain is partly of inflammatory origin and not due entirely to the expulsion. That a great part of the pain is mechanical is made clear by the fact that the pain ends abruptly when the membrane is expelled. The picture of the membrane cast off as pointed out by Dr. Cook, of Washington, shows the whole membrane to have undergone certain changes, *e. g.*, multiplication of the glandular structure, a large increase of polynuclear leucocytes, in fact signs of greatly increased inflammatory reaction. This entire exfoliation of the membrane as claimed by Dr. Williams is due to an excess of fibrous tissue in the wall of the uterus. This excess being due to a failure in evolution at the time of puberty, or a failure of involution after child birth or abortion. The theory held by many, viz., that it is due to an acute inflammation of the deeper tissues at each period seems to me to be the most reasonable one. The treatment of these cases on the whole is most unsatisfactory. Dr. Johnstone claims to cure 9 out of 10 of his cases by thorough curettage and packing, putting them through an artificial labor, as he styles it. If his claim is true, it is really most remarkable and furnishes better results than most men can. Many claim to have effected cures by the application to the endometrium, some days before the expected period, of iodine or carbolic acid. Galvanization is also extolled by some, but on the whole the treatment is unsatisfactory as far as a permanent cure is concerned. Allow me to give very shortly the histories of a few illustrative cases which have come under my notice. Miss A., aged 21, had been suffering for some years with dysmenorrhœa of a rather peculiar type, inasmuch as severe pain was experienced only at every alternate period. For the first two or three years of her men-

strual life she suffered but little. The best of care and tonic treatment had no beneficial effect. A trip to the continent was advised, and during her first period after leaving home, which took place on board ship, she suffered none, and during a stay of three months on the continent she was free from pain though travelling considerably. She remained free likewise for some months after her return. A summer in Muskoka had a like beneficial effect, and the trouble has not returned in anything like its original severity for now more than a year.

Mrs. P., aged 34, had two children and one miscarriage. Suffered greatly during menstruation, also had dragging and bearing down pains, menorrhagia, etc. A dilatation with curettage and packing completely relieved the symptom.

Mrs. J., aged 27, suffered greatly, more since marriage. Examination revealed a latero-anteverted, undeveloped uterus. Marked tenderness on examination. Left ovary tender to touch. A thorough dilatation with curettage and packing relieved somewhat the pain for about three months. A year afterward I removed the left ovary. This resulted in a partial cure of the pain. The woman is still sterile.

Mrs. G., aged 22. Suffered from dysmenorrhœa. Was sterile. Had a retro displacement. Right ovary tender, enlarged and displaced. Two years ago I removed this ovary, pain was relieved. She has now a son eight months old.

A CASE OF MULTIPLE NEURITIS SUCCEEDING TYPHOID FEVER WITH PERMANENT PARALYSIS.

Reported by MESSRS. R. PARSONS and CHAS. P. LUSK,
Final year students at Trinity Medical College.

The writers venture to present this paper for publication because of the exceedingly interesting clinical history which it reveals, rather than from any wish to discuss the subject of Multiple Neuritis. The patient came under the care of Dr. Allan Baines at the Toronto General Hospital and through his kindness and that of Dr. Bingham who operated at a later date performing a radical cure for a condition of floating kidney, we are enabled to place the history before you.

Clinical History.—Mrs. O., aged 26, married 6 years.

Family History.—Mother died at 38 of consumption and heart disease. Her mother's three sisters and one brother also died of consumption and a fourth sister living at the present time has the same disease.

Paternal history, is negative

Personal History.—Had measles when sixteen; no other children's diseases. She was married in 1894. One year later when in Toronto she was taken sick with what she calls dysentery, after a period of general malaise. After being sick for three weeks, during which time the motions of the bowel numbered eight to twelve a day, she sought medical advice. A day or two afterwards, after a sleep of a couple of hours' duration, she awoke to find both lower limbs completely paralyzed. The next day she was taken to the Burnside Lying-in Hospital and was delivered of an eight months foetus Oct. 17th, 1895. The same day she practically lost the use of arms and hands. There was an intense pain in both temples which radiated backwards to the occiput, and thence down the back of the trunk and legs to the feet. During November, she was transferred to the medical wards of the hospital. There the paralysis of the hands and arms began to improve, although generally before going to sleep there was severe twitching of the muscles of the extremities, and also great pain in the supra-scapular fossae, and thickened speech existed for some time. Her vision was dimmed for a while and the muscles of the left hip, thigh and calf, and of the left thenar eminence were markedly shrunken. She went home and about June 30th, '96, was sufficiently improved to attempt standing on her feet, but could not walk and had to be wheeled in a wheel chair for the rest of the year. Then for some months she was able to get about with the aid of crutches. Her condition gradually improved until she was able to do light house work, and could walk as much as half a mile. The left leg and foot would swell at times as far as the knee, and when tired her legs would give way under her completely letting her fall to the ground. During '96 she had herself noticed that the left kidney was movable, and would descend as far as the left iliac region. She has been a continual sufferer from indigestion, and also complains of having had occasional attacks of suppression of

urin, more especially in the winter time. On using the sitz bath a few teaspoonfuls of urine would pass away and sometimes, what seemed to be, pure blood. At times three days would pass without voiding urine. During this time there would be a constant, agonizing pain which she referred to the neck of the bladder, and a more or less constant desire to evacuate the bowel.

Present Illness.—During September, 1900, while in the city, she over-exerted herself and has not been well since. She suffered from palpitation of the heart to such a degree that she was unable to keep the recumbent position. On returning to her home in the country she had occasional attacks or a sensation of distention about the stomach and heart, also she complains of severe pain extending from the ensiform cartilage to the umbilicus, and a constant craving for food which would be relieved by the taking of the smallest quantity. She was admitted to the hospital Oct. 25th.

EXAMINATION.

Temperature, normal. Pulse, 90, normal in character. Respirations, 18, normal in character. Stools, constipation unless using laxatives. Urine. Color, pale straw; odor, faintly urinous; sp. gr., 10.30; albumen, none; sugar, none; urea, 10 grains to the ounce; microscopically, oxalate of lime crystals; epithelial cells; many pus cells.

Digestion is poor; tongue, deep red and slight central fissure.

General symptoms. Palpitation of the heart, constipation, dryness of mouth and throat.

SPECIAL EXAMINATION.

Skin. Moist and cool, but patient complains of cold feet and hands. Chest and neck. Thyroid gland is enlarged, more marked in right half. This has occurred two or three times previously, but has yielded to applications of tincture of iodine.

The chest on inspection shews the right sub-clavicular fossa more flattened than the left. Other signs normal.

Heart. Slight increase of lateral dulness extending 1.25 c.m. to left of nipple line; apex beat, fifth intercostal space, nipple line; auscultation reveals nothing abnormal.

Abdomen. Somewhat distended; soreness in epigastrium; on left side we find a movable kidney, which descends as far as the level of iliac crest.

GENITO URINARY SYSTEM.

Right ovary, slightly tender; neither enlarged. *Body of uterus* is normal. *Cervix.* Cleft on right side to vaginal vault; slightly cleft on left side; external os, everted and admits finger; the endometrium is eroded; a mucous discharge which is foul, but the menstrual period just two days past; menstruation is regular, but the flow is profuse.

Bones, Joints, Muscles, etc. Partial paralysis of the left lower limb and of left shoulder, also of right lower limb, but not nearly so marked. The muscles of the calf of left leg are shrunken and flaccid. Anterior muscles seem normal. The muscles of left thigh are atrophied somewhat

and are soft even when the leg is flexed. This limit is 2.5 c.m. less in circumference at lower and middle thirds than the right. The glutei are markedly atrophied on this side. Knee jerk is present, and ankle clonus is absent. The left arm cannot be lifted above a right angle with the body. The thenar muscles of left hand are flattened and she experiences some difficulty in making the finer movements. The muscles of the right side are but little impaired. In walking, however, the right foot is not lifted so readily as the left nor can the right leg be extended as readily. On attempting to sit up in bed she first turns upon her side, supports herself upon the elbow and then with the aid of the other arm lifts the trunk into the erect position. When prone upon the floor, in order to rise she elevates the hips until the legs are extended, then with the hands she lifts herself into the standing position.

In November Dr. Bingham, with the assistance of Drs. Baines and Powell, performed a nephrorraphy for the relief of the floating kidney. He used the operation which is recommended by Jacobson, in which after making the initial incision and removing the intervening perinephric fat, he incised the capsule of the kidney along the upper and outer border, stripping it from the lateral surfaces, and then suturing the flaps to the edges of the muscular wound. The operation was markedly successful and the patient at the time of writing (three weeks later) has had a good recovery, is experiencing no discomfort whatever, and is ready to return to her home.

DIAGNOSIS.

The atrophy with the absence of all sensory symptoms suggests a condition of muscular dystrophy, though the sudden paralysis with complete absence of hereditary history will hardly bear this out.

The history of the so-called attack of dysentery, which appears rather to have been an attack of enteric fever, and the succeeding paralysis, with pain, etc., suggest a multiple neuritis complicating typhoid. If this be so, the case is worthy of remembrance, in that multiple neuritis complicating typhoid fever according to Osler and other authors is generally recovered from, but in this the paralysis and atrophy of the muscles have been permanent.

THE PREVENTION OF TUBERCULOSIS.*

By J. E. ELLIOTT, M.D., Toronto.

In calling this meeting to order, I feel that it is unnecessary to explain its purpose, but I think I should make some explanation why it is under the auspices of the Young Men's Liberal Club. One of the objects of the Club is to discuss questions for the good of the people, and as president I felt that there was no question of so much importance to the people at the present time as how to prevent consumption. I gave notice of motion some two weeks ago, which I shall presently read, to be discussed at the next regular meeting, but the Executive Committee thought that the question was of such public importance that the discussion should not be confined to the members of the Club; so to lift it as far as possible from the realm of politics, this special open meeting was called, and I am glad to know our efforts to bring the important question before the public has not been in vain.

The notice of motion is as follows:

"In view of the fact that one-fifth of all deaths is due to tuberculosis, and that tuberculosis is a contagious and infectious disease, consequently preventible; resolved, that in the opinion of this meeting the present is an opportune time for all legislative bodies to at once enact laws for the prevention of this dread disease."

I should, I feel, explain that the statistics given in the preamble do not refer to our country but to general statistics. The death rate from tuberculosis in Canada is probably nearer 1 in 7 or 8 than 1 in 5. It may also be of interest to you to know that one-fourth of the deaths between the ages of 15 and 55 are due to tuberculosis. When you begin to realize the magnitude of this fact you can well understand the necessity of every one assisting to improve the conditions which are responsible for these facts.

It is now accepted by everybody that tuberculosis is contagious or infectious, and not hereditary as was believed until recently, in fact, is still the belief of many. I shall not say that it is not hereditary in some isolated cases, but the number of hereditary cases is so few as to not require much notice. A good soil for the germ to grow in, is where the hereditary tendency comes in.

If the disease is infectious, how is it so? Tapiner succeeded in infecting all his experimental animals shut up in a chamber into which large quantities of tuberculous sputa were discharged in the form of spray, and his servant, a robust man, in perfect health, persisted in a spirit of bravado in entering the inhalation chamber and acquired an acute attack of tuberculosis which proved fatal in 14 weeks.

You all know that the lungs are the organs most frequently affected and that the germs are carried from the lungs in the expectoration in great numbers. One expectoration may have as many as two million

* Read before the Young Men's Liberal Club, Toronto.

germs and a person with acute tuberculosis of the lungs may expectorate as many as two or three billion bacilli in 24 hours. These germs are deposited in every place where consumptives go—on the street, in the bedroom, in the street car, in the railroad train. The expectoration soon dries up and the germs are blown into the air and inhaled into the lungs. All the germs do not produce the disease when inhaled into the lungs. This depends upon the susceptibility of the individual who inhales them. Some are inhaled by individuals who are able to resist the attack of the germs and they "fall by the wayside." Others are inhaled by persons who have not the same resistance and the germs get a lodging, "fall in stony places," remain dormant for a long time and when the system is run down from an attack of bronchitis, pneumonia, or pleurisy, or any debilitating cause, they then get their work in and the person becomes a consumptive. Statistics from *post mortem* examinations show that 25 to 50 per cent. of people who die from other causes than tuberculosis have the disease in a dormant state.

Again, there is another class of individuals who inhale the germs into the lungs, where they find a good soil to start in and they develop consumption which runs a rapid course.

Another common source of infection is from taking into the stomach foods containing the tubercular germs. The most common foods containing tuberculous germs are meat and milk. Meat, I may say, is not nearly so dangerous as milk, and as children are the ones who mostly drink milk, they are the most frequently infected with tuberculosis from this source. The fact that milk carries tuberculosis has been proved over and over again. Many instances might be cited in proof of the fact if time permitted. Prof. Kanthack, in 1898, in examining milk from the 16 different dairies supplying the University of Cambridge, found that nine of the samples infected guinea pigs with tuberculosis.

Owing to improved sanitary conditions in the larger European cities, the death rate from tuberculosis has been gradually diminishing, but the mortality of children suffering from intestinal tuberculosis has not diminished owing to the increased consumption of cow's milk. Another strong proof that tuberculosis may be traced to milk, is the fact that calves are free from tuberculosis at birth, and that before the end of two years 50 per cent. of some herds are tuberculous. Statistics collected from abroad of the post mortem examination of 610,000 calves showed that only 12 of them had tuberculosis. This shows conclusively that consumption is not a hereditary disease but an acquired one. It is not necessary to use any further examples to convince you that the germs of consumption are carried into the system through the lungs and stomach by inhaling the germ-laden dust and the eating of contaminated foods. Our duty in future is how to prevent this.

I may here quote from the *British Medical Journal* of May 20th, 1899, over two years ago, the opinion of its Ontario correspondent at that time, of the state of the work of preventing tuberculosis. He says: "We are making some progress in the right direction in Canada, but our municipal bodies are moving somewhat slowly. The Council of Toronto has been urged by the profession of the city to take certain steps towards the

establishment of a sanatorium for our sick poor, but is slow in responding in a satisfactory manner." What was true of Toronto two years ago is true to-day, in fact I regret to say that the sick poor consumptive is in a worse condition to day in Toronto than he was in 1899. To-day we have not a hospital or institution where the consumptive can go for treatment, with the possible exception of a small ward in the Home for Incurables, where only the incurable in the last stages of the disease may go to be cared for.

The question of sanitariums has been discussed in the city from time to time, but it has not been taken up by the Council, who, I consider, are the responsible body to provide for the care of the poor consumptive. Heretofore those interested in the question of the prevention of consumption have taken the broom by the wrong end—only the question of sanitariums has been discussed. This is all very well for those infected, but what is being done to prevent fresh infection? The greatest source of infection, as we have said before, is the expectoration. This should be prohibited in all public places.

If consumptives are allowed about, they should be compelled to carry some receptacle to expectorate in and afterwards destroyed. Notification of all consumptives should be required, not necessarily that they should be confined in sanitariums, like smallpox or diphtheria patients, but those in the acute stages should at least be isolated. This may appear a very stringent rule but the time has arrived when public opinion is ripe for it. You will remember when first the law was formed to placard diphtheria, scarlet fever, etc., there was a great hue and cry; it was not long until the few objectors accepted the situation and now all quietly submit to the regulations. The same would be the case with compulsory notification of tuberculosis. At first we would no doubt have a few objectors, but in time I believe all would willingly submit to the law for the public good.

Another source of danger which might be prevented and guarded against is the milk supply. Statistics show that very few herds of cattle are free from tuberculosis. I am glad to say that the action of both the Dominion and Ontario Governments, has done much to reduce tuberculosis among the cattle of this country. But until we are able to get milk without being contaminated with tuberculosis, it will be necessary to take most stringent means to prevent infection of our children. The only way that I can see in which we can guard the health of the people from infection by milk is to make it compulsory that all milk should be sterilized. We have ample proof that by the sterilizing or boiling of milk, the death rate of children is greatly reduced. In Fecamp in Normandy, the infant mortality was reduced 50 per cent. by the use of sterilized milk, and the deaths from enteritis reduced from 30 per cent. to 16. In another town the mortality from intestinal troubles during the months of July, August and September was on an average 69 per cent., but when fed on sterilized milk the death rate fell to 27 per cent. It has been estimated that 30,000 infants could be saved annually if sterilized milk were used in Great Britain alone. I fully believe much has been done by our City Health Department to improve the sanitary condition of our dairies, but there is much still to be done.

The question of sanitariums is a very important subject; from my point of view I believe we require two kinds. One for the acute cases, and the other for the incipient and curable cases. It should be impressed on the public, that at least 75 per cent. of consumptives are curable if taken in the incipient stage.

The Provincial Legislature has made ample provision in its Act respecting the municipal Sanatoria for consumptives to permit all municipalities to erect and equip sanatoria to which they will contribute the sum of \$4,000 to a building, \$1.50 a week for each patient.

I am strongly of the opinion that all municipalities should control their own sanitariums for the poor consumptive. They should be conducted under the supervision of the Medical Health Officer of the municipality as the Isolation Hospital in Toronto is.

A CASE OF AINHUM

By H. B. ANDERSON, M.D., Toronto.

The specimen which I present to you was sent me by Dr. Harry Johnston, of Balaclava, Jamaica. It is the little toe of a Negro that was only attached by a thin pedicle which Dr. Johnston snipped off. The term *Ainhum*—derived from the Nagos word meaning to saw—is applied to a peculiar disease, which is found among certain dark-skinned races on the Pacific islands, in North and South America, and according to Manson, in India. Dr. Johnston tells me that it is quite common among the Negroes of Jamaica. The condition begins by the formation of a constriction at the base of the toes, especially the little toe—which continues to deepen until the digit is attached only by a narrow stalk. The toe then either falls off or is snipped off. The process is usually a very slow one, sometimes taking years to produce amputation. It does not affect the general health, and little discomfort is caused except when the freely moveable toe gets in the way or when ulceration occurs, which is rare. The disease is more frequent in males than in females, and usually occurs in adults, but has been present in infants a few weeks old. It tends to run in certain families, many members sometimes being affected.

As the constriction at the base of the toe deepens, the distal end of the toe becomes enlarged and bulbous. The various tissues atrophy. In the toe which I show you the bone is soft and cuts with little resistance. The constricting band appears to be thickened structures of the derma. According to Unna the disease is a kind of ring-formed scleroderma. This constricting band really causes strangulation of the structures distal to the band like the snaring of a tumor. Manson thinks the condition is due to the ulceration beginning at the digito plantar fold from irritation, with contraction of the hyperplastic tissues. The lodgement of dirt, etc., in this region would keep up the process until final amputation occurs. Some have described the condition as a trophoneurosis, something of the nature of Raynaud's disease, but on no good reason, which may also be said of the idea that the disease is a form of leprosy.

SELECTED ARTICLES.

ASTHMA.

By R. ALEXANDER BATE, A. B., M. D., of Louisville, Ky.

Assistant to the Chair of the Principles and Practice of Medicine and Clinical Medicine, Hospital College of Medicine, Louisville, Kentucky.

Asthma is a disorder of nutrition, dependent upon the arthritic diathesis, and is characterized by paroxysmal dyspnea due to spasmodic contraction of the bronchial tubes.

The spasmodic contractions, according to Loomis, are due to a neurosis, which depends upon the existence of a peculiar diathesis. Trousseau, Salter and others, likewise speak of asthma as a diathetic neurosis.

Haig attributes asthma to the effect of uric acid upon the circulation in the thorax, and shows that the paroxysms correspond to the natural fluctuations in the excretion of uric acid.

Modern opinion seems to consider asthma a neurosis of the branches of the pulmonary plexus due to arthritis.

In nasal or hay asthma, it is believed, uric-acidemia so alters the nutrition of the spheno-palatine branches as to cause temporary paralysis, thus inducing hyperæsthesia and turgescence of the nasal mucosa.

In bronchial asthma, uric acid in the blood so alters nutrition as to cause a neurosis of the branches of the pulmonary plexus, thus inducing hyperæsthesia and engorgement of the bronchial mucosa, the spasmodic contraction of the muscular fibers, and various manifestations of deranged katabolism.

The manifestations of functional derangements are the diminished quantity of oxygen and water, excreted by the lungs, also the fatty acids, the octahedral crystals of Leyden, and the spirals of Curschmann found in the expectoration.

Loomis found the oxygen of the expired air was almost entirely replaced by carbonic acid. The exact pathology of the gravel-like bodies and mucous pearls of the sputum is not clear.

Asthma frequently alternates with neuralgia, migraine, angina and cardialgia—all diseases due to uric-acidemia.

The famous case of Peter the Great, and many others, have been cited where the asthmatic manifestations gave place to gout. The asthma became relieved as the blood was freed of uric acid. Gout developed because the uric acid was precipitated from the blood into the tissues.

The protean manifestations of arthritis can be understood if we regard the entire vascular system as one organ, upon which the perfect nutrition of every other tissue in the body is dependent.

If the blood when most alkaline becomes loaded with uric acid, the size and relative nutritional capacity of this vascular organ is greatly diminished. Thus the nutrition of every structure in the body may be modified.

However, some tissue, either by inheritance or acquisition, is weaker than the rest, and first makes manifest the deranged nutrition. Molecular starvation causes loss of function of the cells in all diseases of uric acidæmia.

The other class of arthritic disorders occur when, from lessened alkalinity of the blood, uric acid is precipitated into any of the numerous adjacent tissues.

Heredity, anatomical and physical causes especially determine the site of the precipitation. This second class of diseases are characterized by the manifestations of an actual irritant instead of being merely functional disturbances, as in the first class.

Asthma belongs to the first class. Pulmonary weakness being the predisposing cause, any age may be afflicted; but the greater proportion of cases occur during adult life. Males are affected twice as often as females, and the disease is transmitted along the male line. Heredity can be traced in 50 per cent. of the cases. Arthritism in some form, perhaps, could be traced in every instance.

Attacks come on most frequently at the beginning of the alkaline tide, which is from two to four o'clock in the morning, when the blood is surcharged with uric acid.

Bronchitis is present in eighty per cent. of the cases; intestinal indigestion, characterized by flatus, and skin diseases also occur.

The causes of asthma may be divided into two classes:

First.—The systemic or essential cause, the arthritic diathesis.

Second.—The local or exciting cause of the attack.

The first of these is, perhaps, present in every case. Loomis says: "Unquestionably, the primary cause of asthma is some constitutional idiosyncrasy."

Aneurisms of the aorta and other mediastinal tumors, in certain instances, have produced asthma. These tumors press constantly upon the pneumogastric nerve, yet the asthmatic paroxysms agree with the alkaline tide. Instances of this kind seem to emphasize the necessity of both diathesis and neurosis. The pressure explains the neurosis, and the paroxysms occurring only during the alkaline tides show the arthritism.

The second class of causes—the local or exciting causes—can only act when the first exists. That is, the condition essential to the paroxysm, as turgescence, hyperæsthesia and spasmodic contractions of the muscles, can only occur when the nutritional disorder has resulted in a neurosis of the pulmonary plexus.

Among the exciting causes may be mentioned: irritating inhalations—dust, smoke, chemical vapors, fumes of sulphur, burning sealing-wax; vegetable irritants, odors of ipecacuanha, roses, hay, rag weed, and emanations from animals. Also emotional disturbances, sudden chilling, and climatic influences, all of which affect the relative alkalinity of the blood. Among the reflex causes may be mentioned an overloaded stomach or rectum, and uterine disturbances.

Chronic inflammations and diseases of the nasal mucous membrane, cardiac disease, and emphysema may likewise produce asthma. Too sudden arrest of chronic discharges, retrocedent gout, syphilis, skin diseases, and renal diseases are classed as excitants.

The relation of phthisis to asthma seems an unsettled question. Some regard pulmonary tuberculosis as "an antecedent disease having a casual relation to asthma." Others regard asthma as antagonistic to phthisis, and believe an arrest of the tubercular trouble occurs with the onset of asthma. The anatomical changes observable in asthma only occur when the disease has become chronic. They are products of inflammation incident to chronic bronchitis, and the emphysematous condition resulting from habitual overdistention of the air cells.

The asthmatic syndrome is a classical portrayal of uric-acidæmia. As observed in most uric acid disorders, a prodromal buoyance gives place to corresponding languor and depression of spirits.

Ingestion of any of the xanthin group clears the blood of uric acid and causes this exhilaration only to be followed by an increased uric acidæmia when the alkaline tide begins.

Sleeplessness, pruritus, and headache are marked.

At first there is voided large quantities of limpid urine, in which the uric acid is diminished. This soon gives place to scanty high-colored urine loaded with urates. The paroxysm comes on usually during the alkaline tide, in the small hours of the morning; after a meal that raises alkalinity, or during the afternoon alkaline tide—from three to six o'clock. The capillaries are obstructed, the veins distended, the surface temperature below normal, and the extremities cold, blue and shrunken.

The pulse is "small and thready." The sufferer rushes to the window for oxygen, regardless of the outside temperature. The high arterial tension thus manifested explains the frequent presence of bronchitis, acid dyspepsia, renal and skin diseases.

The physical signs, together with the history, make it impossible to confuse asthma with any other disease.

The attacks may last from a few hours to several days, and have a great tendency to become chronic.

Emphysema and dilatation of the right heart usually are found in those having suffered for years.

Modern treatment has not only been able to cut short the attacks in most instances, but to prevent a return, as well.

A cure, in the sense of immunity, as results when cured of certain microbial diseases, of course never occurs in a disorder of nutrition. The same nutritional disturbance, which primarily existed, will cause a return of the disease.

Since arthritism is the essential cause of asthma, prophylactic treatment should be begun in the children of all lithemic individuals, especially the sons of asthmatics.

Prophylactic treatment embraces proper hygiene and diet. The environment should be changed where several generations have been reared upon the same soil under identical conditions.

Oxidation should be promoted by an out-of-door life, mountain-climbing, sea voyages, bathing, massage, or other means. Warm, dry climates are to be preferred, and flannel should be continuously worn.

The diet should be as nutritious as possible, and free of the uric acid group. No tea, coffee, chocolate, alcohol, red meats, bananas, strawberries or tomatoes should be used.

The lentils and articles of diet containing salicylates and phosphates (in other than nucleic form) are serviceable.

Since a deficiency of oxygenation is the cause of the products of incomplete metabolism, that class of food that carries with it most oxygen, the carbohydrates, should constitute the greater part of the diet.

As expressed by Stewart: "With a diet containing less proteid and fat and more carbohydrate the oxygen deficit would be less."

The medicinal treatment embraces the management of the attack and the limitation of the diathesis. For the control of the attack the exciting cause must be removed and the uric-acidæmia must be overcome. The exciting cause should be ascertained, and if it be irritating inhalation, reflex or mechanical, atmospheric or emotional, auto-intoxicant or extraneous cause, it should, if possible, be removed.

Freeing the blood of uric acid re-establishes the circulation, opens the obstructed capillaries, empties the engorged veins, overcomes the cyanosis, and permits relaxation.

The therapeutic measures overcoming uric-acidæmia are the hypodermic injection of morphine and atropine sulphates, hydrochlorate of apiomorphine, bisulphate of quinine and acid salts of similar alkaloids. Oxygen and the nitrites may be used by inhalation.

The nitrites both free the blood of uric acid and dilate the capillaries.

The drugs most popular for internal administration—the iodides, the acid phosphates, the coal-tar derivatives and such depressants as lobelia and tobacco—have also been shown by Haig to raise the acidity of the blood.

The diathetic or curative treatment (to be administered during the interval) consists in removing the uric acid from the system and in permanently keeping down arterial tension by a diet free of the xanthin group.

The mendicaments eliminating uric acid from the system are the salts of lithia, the salicylates, piperazine, and other uric acid solvents. Acid salts of arsenic and quinine are supposed to lessen its production in the system.

The suprarenal extract is indicated for its tonic action on the cardiovascular apparatus, aside from any action it may have upon retrograde metamorphosis.

Cholagogues and laxatives to unload the liver and intestines are both necessary during the attack and the interval.

• Holding in view the principles laid down by the school regarding asthma as a diathetic neurosis, together with the treatment elucidated by Alexander Haig, has undoubtedly been the most satisfactory in my hands.—*Interstate Medical Journal*.

OVARIAN GRAFTING.

Dr. Robert T. Morris in an interesting article in the *Medical Record* reviews a number of his own cases of ovarian grafting together with a résumé of the literature up to date. His first notes upon cases treated in this manner appeared in 1895 and it would seem that to him belongs the credit of the idea, subsequently developed by others at considerable length, particularly in experiments upon animals. The two facts that led to the writer's own experiments were the continuance of function displayed by thyroid glands grafted upon cases of thyroidectomy and the occurrence of menstruation and even pregnancy in cases of double ovariectomy; the reason for the latter he thinks is explained by a case in which he had occasion to open the abdomen some months after a double pyosalpinx operation and found that a small portion of the ovary, distal to the ligature and of course deprived of its original circulation by way of the broad ligament, had retained its vitality, instead of being absorbed as is usually supposed in such cases. It therefore occurred to him that a piece of ovary might be deliberately transplanted with as good results as when accidentally done; that thus the menopause might be averted and pregnancy become a possibility; also that such experiments if successful would afford an argument against the removal of supposedly useless uteri in cases whose adnexa had been extirpated.

His first case was a woman, two years married but never pregnant, from whom both tubes and ovaries were removed for septic trouble of long standing. A small piece of one ovary was transferred to the interior of the stump of the right oviduct. The patient became pregnant soon after leaving the hospital but aborted at three months, probably on account of persistent adhesions; she continued to menstruate for about four years. The second case was a girl of twenty years with infantile uterus and rudimentary adnexa, who had never menstruated. A portion of ovary from a woman thirty years old was grafted into the fundus of her uterus. Beginning eight weeks later she has continued to menstruate with some irregularity but in a fairly normal way, has improved much in personal appearance and is relieved of the symptoms of suppressed menstruation from which she formerly suffered. In the interests of science, no effort should be spared to induce this young woman to marry.

Of the writer's remaining cases, six have been lost sight of too soon to allow conclusions to be formed, though they continued to menstruate so long as they were under observation. Four other cases are reported, though two of these are of recent date. Case III, twenty-two years old, had ovarian cysts removed successively from both sides, and at the second operation a portion of another patient's ovary was grafted into the left broad ligament. She was heard from a year later and during that time had menstruated regularly and easily. Case IV, thirty years old, had suffered from very painful menstruation accompanied by much reflex

disturbance. A diagnosis of ovarian sclerosis (afterwards confirmed) was made and both ovaries were removed. With the exception of two months some time later, when she appeared to have a pelvic thrombophlebitis, she has menstruated regularly and painlessly, the freedom from pain being due doubtless to the removal of the ovaries but the continuance of menstruation to the grafting operation. Case V., similar to the preceding, had an apparently normal portion of one ovary transferred to the left broad ligament; menstruation was deferred for some months but has now returned and is less painful than formerly. In Case VI., a similar operation was performed; for four years she has menstruated regularly, though sometimes scantily and, while she has some pain due probably to the reformation of adhesions, she suffers much less than before. This case is a married woman but has not become pregnant.

The writer now chooses a point of the broad ligament as near as possible to the normal site of the ovary, slitting the ligament and suturing to the raw surface thus formed the raw surface of the ovarian fragment, leaving the latter uncut surface to project into the peritoneal cavity. As untoward results he mentions the case of supposed thrombophlebitis, a case (V.?) in which the patient's own ovary, already degenerate, continued to undergo degeneration, and a third, that was thought to have an extra-uterine pregnancy but disappeared from observation. Such a pregnancy is liable to occur unless the oviducts with their fimbriae be left (as is often possible) intact.

From these cases and from experiments upon animals it is evident that ovarian tissue may be transplanted with continuance of its function and even with the possibility of future pregnancy. Even more interesting is the case of the young woman with undeveloped uterus and adnexa who after the introduction of normal ovarian tissue began to menstruate. As the writer suggests it is important now to learn what would be the effect of ovarian grafting upon patients whose ovaries have been removed some time previously. Doubtless many of these cases might have been spared a premature menopause and its various accompanying disturbances, could ovarian grafting have been done originally. But would the operation, even now, prevent further degeneration or undo such as has already occurred? At all events the experiments are sufficient to show the possibilities of work along these lines and, as the author insists, constitute a reasonable argument for leaving the uterus whenever possible. Should some of these experiments result in pregnancy we should fancy certain not uninteresting medico-legal questions might arise but we suppose this is one of the objections that Dr. Morris classifies as "fanciful"; and when at last a real baby is produced from such a dual league it will be time enough to decide whether the infant belongs to the woman whose tissues, though cast upon a foreign shore, really sent it forth or to the woman whose uterus took the wanderer in and harbored it for nine weary months; and whether the second woman would be justified in a suit to recover rental; or, failing in that, in ejecting the tenant before the lease should have expired.—*Amer. Gyn. and Obs. Jour.*—A. D. C.

ROUTINE DOUCHING IN OBSTETRICS.

Since Semmelweis showed how greatly the mortality from puerperal infection might be reduced by simply washing the operator's hands before delivery, much attention has been devoted to methods for still further diminishing the number of infected cases. With this object in view routine vaginal douching before labor has been advocated by many obstetricians. In the year 1887 Gönner announced that the vaginal secretion of pregnant women examined by him did not contain the pathogenic bacteria which were usually found in puerperal infections, and that for this reason the use of vaginal douches before labor for the prevention of auto-infection was unnecessary. Since that time the advisability of routine douching before and after delivery has been frequently discussed.

The statistics advanced by those in favor of routine douching, as well as those presented by the opponents of this procedure, are of uncertain value. This is due largely to the diminution of the number of cases of infection in the maternity hospitals, by reason of the many improvements in aseptic technic, such as the restriction of frequent internal examinations, and careful disinfection of the hands. This small proportion of infected cases affords poor grounds for estimation of the results of antepartum douching, as some of the cases infected are doubtless due to individual errors in technic and so prove nothing in regard to the value of douches.

Certain observers have discovered pathogenic micro-organisms in the normal vagina and for this reason advocate prophylactic douching. Others hold that the vaginal secretion possesses bactericidal qualities. These are attributed by Döderlein to its acid reaction produced by the vaginal bacillus which bears his name. The experiments of Krönig show that the vagina takes longer to eliminate pathogenic bacteria artificially introduced, when douches are employed; and other investigators have found that douching, with or without antiseptic solutions, usually fails to remove such organisms.

The recent bacteriological researches of A. Wadsworth (*American Journal of Obstetrics*, April) have led him to condemn routine antepartum or postpartum douching. His technic was such as to exclude all possibility of contamination of the uterine and vaginal secretions, and both cultures and staining methods were employed. He found that it was exceptional that pathological bacteria persisted in the vaginal secretion through pregnancy and labor, but that if they were present the lochia favored their growth, and energetic antiseptics after labor was necessary. Cultures from several cases in one of the best of New York's maternity hospitals demonstrated the persistence of streptococci in the vagina after repeated douching with a 1-5,000 solution of bichloride. He considers as requisite points that the disinfecting solution be brought into contact with all bacteria by distending the folds of the vagina, and that it be of sufficient strength to kill the micro-organisms without, however, injuring

the vaginal wall. The douche, as ordinarily given, merely removes the protective resources of the vagina. Wadsworth's cultures confirmed the statement that the uterine cavity is usually germ-free. He emphasizes the necessity of differential diagnosis between sapremia and septic conditions, since intra-uterine douching after labor is strongly indicated for the removal of the abnormal contents of the uterus in the former class, while in septic conditions it is likely to aid in disseminating the process unless the uterine sinuses have been closed by granulation tissue. The rule which he lays down is that bacteriological examination of the cavity of the uterus should always precede an intra-uterine douche and such an examination should be made early, since, if a radical operation is required, an early determination of this point is of great importance in regard to its prognosis.

Reviewing the results of Wadsworth's observations as well as those of others, one cannot fail to note that antepartum douches frequently fail to remove pathogenic bacteria when they are present: but they destroy the natural protection of the vagina, whether this be its secretion as a whole or the vaginal bacillus; that they are liable to cause slight injuries to the vaginal wall and so furnish points for the entrance of infection, or at least by removing the lubricant of the vagina to make labor more difficult and thus favor such vaginal traumatism; and, finally, that pathogenic bacteria may be introduced by these manipulations. For these reasons, and on account of the danger of dissemination of sepsis by intra-uterine douching while the uterine sinuses are closed only by infected blood-clots, one must in general agree with Wadsworth's conclusion; that "the routine management of cases should be freed as far as possible from all procedures which interfere with the natural resources of the body; for these, in the vast majority of cases, are sufficient protection against the invasion of pathogenic bacteria. In the few exceptional cases requiring interference this should be determined and directed by the bacterial examination."

This statement seems open, however, to slight modification. No one will deny that after manipulations which require the intimate contact of the hand with the interior surface of the uterus, as in manual extraction of retained secundines, it is wise to give immediately a bichloride douche for the purpose of flushing out any pathogenic bacteria which may have been introduced, before they have an opportunity to become attached to the uterine wall. Such a bacteriological examination as Wadsworth advises is obviously beyond the reach of the attending physician in a large proportion of cases in private practice, and in these the indication for douching must necessarily be derived from careful exclusion of all other causes of fever, with the presence of local symptoms. Whether the uterine condition is one of sapremia or of sepsis must, in such a case be determined by the judgment of the physician, aided by the history of the labor and the probability of the infection before or during labor as opposed to retention of secundines. As a general rule avoid douching in obstetrics unless it is particularly indicated.—*Med. News.*

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

Stated Meeting April 3rd, 1901.

The president, Dr. W. H. B. Aikins, in the chair.

Notice of Motion—Dr. Meyers—To amend Sec. 2, Article IX, of the constitution that the nomination of officers shall be held at the April meeting of each year.

Papilloma of Larynx—Dr. G. Eoyd read clinical notes of this case, occurring in a child 6½ years of age. First came under his notice in November, 1898, with loss of voice. Measles at 4 years and history of several attacks of croup. In spring after measles became hoarse; since that time voice gradually lost. Physical examination showed respiration etc., normal. Papillomatous patches on both cords; tonsils hypertrophied. Three weeks after operation symptoms of whooping cough set in. Membrane appeared and antitoxin and calomel fumigations employed. Intubation performed, tube for a four year old child being used. The tube was expelled in a few days but as there was no dyspnoea present it was not replaced. Two days after a severe laryngeal spasm occurred and the tube was reinserted. Post mortem examination showed usual signs of asphyxia.

Dr. Ryerson and Anderson discussed the case.

Multiple Neuritis.—Dr. D. C. Meyers exhibited patient and described the conditions present in this case. This man during the latter part of January was exposed to a severe cold and following that paralysis set in in both hands and feet, beginning simultaneously in all four extremities. Dr. Meyers had been unable to trace the cause to any other source than a severe cold.

Drs. Anderson and Rudolf discussed the case, the latter stating he had seen the patient in the hospital and thought he had had from him a history of using white arsenic in connection with his work.

Internal Hydrocephalus—Dr. H. C. Parsons described this case which had occurred in a child of 12 years. At the age of seven the child was quite well, going to school and quite bright. A full description of the case has already been reported.

Stated meeting, May 1st, 1901.

The president, Dr. W. H. B. Aikins, in the chair.

Visitors present :—Drs. D. M. Anderson and Howland.

Tempero - Sphnoidal Abscess, Operation, Recovery - Exhibition of Patient.

Dr. Herbert A. Bruce presented this patient and recited history of the condition. It occurred in a young man of twenty-four years. When

he was a small boy about five or six years of age he had ear trouble,—otitis media in the right ear and was treated in Toronto by two or three ear specialists for a period of five or six months. He was taken home then apparently cured, continuing to have a little boracic acid dusted in to his ear, and the discharge ceased in a few months. Up to the 1st of March of this present year had no trouble apparently at all except occasionally a little discharge at times when he got a cold ; but it was nothing to speak of at any time,—only a few drops and then it would cease. He was on the ice playing a wind instrument, a trombone in the band of a country town, and the next day he was taken seriously ill. He said he felt as though he had blown a hole through his ear. His temperature was 101 and pulse increased to 100. Headache, pain in the side of the head and sickness of the stomach were present. The local doctor was called in and prescribed for him and he lay in bed for two weeks. He had very few symptoms when seen by Dr. Bruce. He was lying in bed, quite rational, with a temperature of 97.4-5 and a pulse rate of 66, with pain in the side of his head and sickness at times. The history was that he was sick every day three or four times without any apparent cause, which had no relationship to the ingestion of food. He had not been out of bed then for two weeks and inquiry about dizziness or giddiness showed that none had been present. Dr. Bruce got him up to walk a little through the room when he felt a little light headed, but not more than one would expect after lying in bed that length of time, so that was not looked upon as a symptom of importance. He had much exaggerated knee jerks and ankle clonus on both sides, particularly well marked on the right side. Drowsiness was another condition present. He slept a great deal and seemed drowsy and willing to go to sleep almost any time. He took nourishment fairly well. These were the only symptoms present. There were no eye symptoms. Dr. Bruce found a slight discharge on examination of the ear very slight, with perforation of the drum. Over the mastoid there was a slight amount of swelling. He came to the conclusion that there was certainly mastoid disease and probably also cerebral abscess. He advised his removal to Toronto General Hospital, where he was taken immediately and after two days in bed he was operated on. The condition found was briefly as follows :—An incision was made in the usual position down over the mastoid from the base to the tip, one half inch behind the ear and the antrum was opened. Pus was found here and then on passing a probe down into the cells, these were found filled with cholesteatomatous material. A portion of the aquamous bone was then chiselled away thus exposing the temporo-sphenoidal lobe of the brain. A grooved trocar was passed in and pus was seen oozing along the groove. A considerable quantity of pus was then evacuated, between three and four ounces and there was a cavity as large as a tangerine orange. The ossicles were then removed from the ear and a portion of the posterior wall of the meatus removed. A drainage tube was placed in the cavity and dressings applied, the whole wound being left open. This operation was performed on the 14th of March last, about seven weeks ago ; and the result is very satisfactory. The cavity drained nice-

ly and Dr. Bruce thinks it entirely filled in, but a little opening remains and syringing is still done through the opening and out at the external auditory meatus. During the first week after the operation there was considerable delirium, the patient being noisy and restless, but that disappeared and he made a satisfactory recovery. One peculiar feature of the pus was the extreme offensiveness of the odor. The roof of the middle ear had been completely destroyed.

Dr. Hamilton asked Dr. Bruce the condition of the reflexes, which were much increased before the operation. Dr. Bruce then examined these and found them still slightly exaggerated. Ankle clonus was also still slightly present.

Dr. Orr thought that chronic suppuration had been going on in the middle ear for many years and that it was extraordinary that there should be such extensive lesion of the bone with so few symptoms.

Dr. Ross referred to the case of a boy who was shot in the temporo-sphenoidal region. A probe demonstrated that the bullet had gone through the bone. He was perfectly conscious; no symptoms at all, until gradually and slowly he began to get weaker and weaker until he finally died and on post-mortem examination one half of the brain was a great amount of pus.

Tumor of Thigh,—Clinical Notes.

Duodenal Ulcer,—Specimens.

Dr. F. LeM. Grasett reported these cases and presented the specimens. The second was a case of ulcer of the duodenum with rupture into the peritoneal cavity, and death following somewhere within forty-eight hours. It occurred in a domestic servant. The case was first seen by Dr. A. A. Small and when seen by Dr. Small indicated that there was some trouble in the neighborhood of the appendix. There was dullness in the right flank, and the diagnosis was confirmed a few hours later by Dr. Nevitt. The woman was rapidly approaching a moribund condition, and if something were not done immediately death would intervene. Dr. Grasett then operated and found everything in the right region normal. There was, however, a collection of fluid like thin green mucilage, the like of which Dr. Grasett had never seen before. He considered there must be a rupture somewhere; and if he had prolonged the incision upwards he thinks he would have found the rupture without any difficulty; but the anesthetist said the patient was collapsing, so Dr. Grasett desisted. The patient died one to one and a half hours afterwards. It was found post mortem that rupture had taken place in the duodenum from an old ulcer, probably the day before. Everything she had been taking the way of food went into the stomach and then into the peritoneal cavity. By external palpation nothing could be felt she was in such a tympanic state.

The tumor of the thigh was a fatty tumor. The specimen shows that it is broken down forming a large cyst in the centre and a number of smaller cysts. It produced a large tumor in the back of a woman's thigh a little above the popliteal region. It had existed there for eight

years. Six months before she was seen by Dr. Grasett, a doctor attended her in confinement and during the confinement he noticed this tumor. Six months after this the tumor had grown enormously and there was great pain in the sciatic nerve and the woman was rapidly becoming a cripple. Dr. Grasett then operated and had no trouble in enucleating it. A large part of the tumor had lifted up the sciatic nerve and it took considerable time separating the nerve and tumor. The wound healed by first intention from end to end. Gradually power came back into the limb and the woman got perfectly well. She sat up in the hospital and got an attack of the gripe followed by trouble in the middle ear. From this she recovered. Examination of the tumor was made by Dr. Anderson and pronounced a lipoma. An interesting feature of the case was the manner in which the tumor was hugged by the sciatic nerve.

Dr. A. A. Smail enlarging on the case of duodenal ulcer said the patient, a very healthy looking young girl of seventeen years, came to him complaining of nausea and only nausea, for which he prescribed a mild stomachic. He was called to see her early the following morning, when he found her complaining of very severe abdominal pain, which pain was confined to the right inguinal region. She was sent at once to the hospital; and it was thought that it might be copro-stasis, a high enema was given with very slight result. Section was then advised, and the results found as given by Dr. Grasett.

Dr. George A. Bingham spoke in reference to the lipomatous mass. There is danger in connection with these tumors and mentioned a case of a woman of 60 years, who had had for twenty years a small mass situated over the anterior crural nerve. Ulceration occurred from irritation of underclothing and there was general breaking down of the whole mass. The temperature rose to 101 or 102 and there was a slight cardiac murmur, also prior to operation. The growth was removed and for some time after the operation this cardiac murmur persisted. It was probably due to septic endocarditis as a result of absorption owing to broken down tissue, from a simple fatty tumor. This gradually got well and the patient left the hospital recovered.

Dr. Ross referred to a case of duodenal ulcer occurring in his practice. Patient was taken suddenly with pain, with severe hemorrhage from the stomach and died. Post mortem showed old duodenal ulcer, which had suddenly perforated into a vessel resulting in death. Also spoke of a case in consultation, a man, who for years, had very severe hemorrhage from the intestine at long intervals. This case was jocularly referred to as "onionitis" from pieces of green onion being found in stomach when operated on. From this the man made a good recovery, but some months after came back to the hospital. He died and on post mortem found old ulcer.

Operations for Deformities With Photographs.

Dr. George A. Bingham presented photographs and recited the history of this case. A cripple, a young lad of 14 years, although he looked 17, came to the Children's Hospital, having heard of the wonderful sur-

gical operations done at this institution. From his head to his knees his physical condition was normal, but from his knees down he was not so. This lad had a dog and sleigh, to which he harnessed the dog and drove down in winter time to the Children's Hospital, not having other means of getting there and being bound to get there somehow. The right leg below the knee was rudimentary, eight inches in length. There was but one bone in the leg—the tibia. There were only four metatarsal bones and four toes. The foot was turned looking directly upward in the direction of the knee. The toes were also webbed. Dr. Bingham amputated at once and procured an excellent stump. The bones of the left leg were twisted inward. The internal malleolus was lower than the external; as a matter of fact he walked on the internal malleolus. The metatarsal bones were turned inward toward the toe. This leg was perfectly useless and the problem was what to do with it. Dr. Bingham chiselled the bones and broke them down in order to bring the foot back into proper relation with the leg. There was great difficulty in getting the bones to co-adapt properly.

Dr. Meyers motion to elucidate the meaning of clause 2, Article IX of the constitution fixing the April meeting of each year for the nomination of officers was carried.

Dr. Pepler as treasurer was authorized to remit \$25 to Dr. Conerty, of Smith's Falls, and also to open a subscription list towards a fund for Dr. Conerty from members of the Clinical Society.

GEORGE ELLIOTT,
Recording Secretary.

MISCELLANEOUS.

Gonorrhœa and its Treatment from the Present Standpoint.

Henry J. Scherck, of St. Louis, after briefly considering the anatomic features of the urethra enters into an account of his routine treatment. In acute specific anterior urethritis, the canal is first washed with lukewarm water, then injected by means of three-ounce, blunt-pointed syringe with a solution of either 2 per cent. mercuriol, 5 per cent protargol, or 1 per cent Crede's silver. The solution is retained for five minutes after which irrigation from a two-gallon vessel filled with 1-10 per cent solution of potassium permanganate at 120 degrees F., is practiced at a pressure sufficient to distend the urethra without overcoming the sphincter muscle. This local treatment is practiced every day or twice a day, the strength of the permanganate solution being gradually increased to twice the original. Internally, diluents and capsules containing cystogen (ammonio-formaldehyde) gr. v. with ten minims of santal oil, are administered. The same treatment is likewise pursued in chronic urethritis, except that the glands must first be emptied by stretching with straight or curved Oberlaender dilators. In case of prostatic gonorrhœa, the gland is emptied by rectal massage and the solutions of mercury salts injected directly into the prostatic portion by means of a deep urethral syringe. — *St. Louis Med. Review.*

The Treatment of Chronic Rheumatism by Spinal Counter Irritation.

In a paper on the treatment of chronic rheumatism, Dr. A. C. Latham calls attention to the benefit to be derived in certain cases of chronic articular rheumatism from counter-irritation applied over the spine. He relates two cases in which the greatest relief followed the application of blisters over the cervico-dorsal and dorso-lumbar regions of the spinal column. Not only did the joints recover more or less mobility, but the structural changes in the effected joints also underwent improvement. This method would seem to be equally applicable to advanced cases of chronic arthritis with eburnation of the articular surfaces, by checking the evolution of the painful manifestations, even arresting the further progress of the disease.—*The Medical Press and Circular.*

Bronchitis (subacute)

R. Strych. sulphat	gr. ss
Codeinæ	gr. ij.
Terpin. hydrat.....	gr. xxiv.
Guaiacol carbon	gr. xl.

M. ft. caps. No. xii. S. One every three hours.

Fetid Breath.

R. Thymol	gr. viij.
Spir. vini rect	3 i
Glycerini	3 ss.
Formol	gtt. viij.
Aquæ	q. s. ad 3 viij.

M. S. Use as mouth wash, especially when fetor is due to decaying teeth.—*Medical Times and Hospital Gazette.*

Ichthyol in Erythema Nodosum.

In a letter from London, by Dr. Raymond Crawford, published in the *Therapeutic Gazette* for March, Dr. Brownlie is cited as recommending the following formula:

R. Ichthyol	2 drachms;
Alcohol, {	
Ether, { each	3 "

M. The alcohol and ether are first mixed, and then the ichthyol added; else an insoluble deposit is formed. Painted on, it is said to relieve the burning pain speedily. Dr. Crawford himself recommends a paint consisting of a drachm of ichthyol in an ounce of collodion.

An Ointment for Intertrigo.

We find the following formula in Reed's *Textbook of Gynecology*:

R. Zinc oxide, {	
Bismuth subcarbonate, { each	30 grains;
Carbolic acid	10 drops;
Vaseline	1 ounce.

M. To be smeared on the affected surface.—*Philadelphia Med. Jour.*

Treatment of Obesity.

A treatment which has of late found much favour on the Continent for the purpose of reducing obesity without the production of any inconvenience or injury to health, consists in giving very small doses of thyroid extract on an empty stomach, followed by Marienbad water and the administration of quinine and theobromin. If all the favourable results ascribed to this procedure are truly reported, then it would appear that the difficult problem of the treatment of obesity had been satisfactorily solved—but this remains to be seen.—*The Medical Press.*

Instant Relief of Pains.

According to Winterburn, in the *Journal of Obstetrics*, in many cases a nice warm meat is better than any medicine; "still, where the pains are exhaustive and severe, I turn to amyl nitrite. This potent drug is a very effective controller of after-pains, and used cautiously I see no reason to apprehend harm from it. A neat way of using it is to saturate a

small piece of tissue paper with five or six drops, stuff this into a 2-drachm vial and request the patient to draw the cork and inhale the odor when she feels the pains coming on. It acts with magical celerity.—*Med. Progress.*

Manganese dioxide, combined with ferrous carbonate, is effective in amenorrhea with anemia.—*Med. Summary.*

Chronic Bronchitis.

Eucalyptol	1 dr.
Camph. tinct. opium	4 dr.
Syrup tolu	1 oz.
Simple syrup	to make 4 oz.

Teaspoonful every four hours.

Oil turpentine	
Tar	aa 20 min.
Oil eucalyptus....	50 min.
Balsam tolu.....	1½ dr.
Benzosol	4 dr.

Make into 60 capsules. One four or five times a day.—*Merck's Archives.*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
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The Oldest Medical Journal in the Dominion : Established 1867.

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EDITORIAL.

EAR COMPLICATIONS OF LA GRIPPE.

The late severe epidemic of la grippe has been attended by an unusual number of cases of inflammation of the ear, in most instances fortunately of one ear only, but in a good percentage, of inflammation of both ears. These have been divided again into at least three classes, viz.,—catarrhal, suppurative, and those accompanied by mastoidal inflammation more or less severe.

The first of these classes has yielded to applications of ear drops containing 10 per cent. of cocaine, with 1 per cent. of atropine and morphia, combined with carbolic acid and glycerine, warmed and used very frequently according to the persistence of the pain. When these have proven insufficient to allay the inflammation, the use of two or more leeches in front of the ear has relieved the congestion and allowed Nature to have her way.

In the second group the cases which have given most trouble have been those where the perforation of the drum membrane has been too small, or situated too high up to allow of free drainage. Here we have

found that a slight enlargement of the perforation, made by a blunt pointed Graefe knife, 'under cocaine' anaesthesia, and followed up by measures designed to evacuate the middle ear, have been most u-eful. The evacuation may be secured by the use of the Valsalvan or Politzer methods of inflation through the nose, or what is simple and less apt to produce passive congestion, by means of suction through a flexible rubber tube which will fit the external meatus, or by Seigel's suction speculum. This evacuation requires to be made frequently enough to prevent the collection causing pain, and gently enough to avoid passive congestion, or the forcing of pus into the antrum. In many cases also the perforation has required to be enlarged more than once.

In the third class of cases, leeches vigorously applied and followed by heat to stimulate the flow of blood from the leech wounds, and to promote the discharge of pus, have proved useful. In many cases, however the mastoid has required to be opened and thoroughly evacuated. It is unfortunate that so many mastoidal cases have been permitted to go so far without surgical interference, and that a number of deaths have resulted from meningitis and blood poisoning which might have been saved perhaps, had early incision been made. Where the invasion of the mastoid was marked at the visit by redness behind the ear and puffiness of the coverings of the bone, the indications were decided, but it often occurred that pain was the prominent symptom, and time was lost in relieving this without operation, when in fact the strength of the inflammatory process tended inwards and upwards rather than outwards. When an opening was finally made in these cases, the whole of the mastoid cells were found invaded, and the sigmoid sinus laid bare, while the poisoning process had invaded the blood stream through one of the avenues with which the ear abounds.

The whole course of these cases has given a fresh demonstration, which should not be needed in these days, of the absolute necessity for thorough and watchful care in the disinfection of the naso pharynx in all cases of la grippe to prevent the closure of the Eustachian tube, and the spread of the inflammatory process to a mucous membrane which is as vulnerable in the tube as in the nose and its accessory sinuses. If the physician would accustom himself to observe the condition of the drum membrane with the same care as he takes the pulse and the temperature, early congestion would be noted and precautionary measures taken, but unfortunately the physician neglects the ear clinic in his student days, and in the press of his work thereafter has few opportunities to acquire the needful technique.

D. J. G. W.

FILTHY BANK BILLS.

The present outbreak of smallpox has caused some of our lay contemporaries to speculate on the chances of infection being carried by means of bank bills that are continually passing from hand to hand. That the danger is a very real one requires no argument to convince any one who has even the most limited knowledge of the spread of infection, though there is no means of estimating how often infectious diseases are actually disseminated in this way. The occurrence of isolated cases of smallpox in districts where the patient can trace no other means of exposure, often suggests infected bills as the means of infection. These bills remain in circulation until they are often in a most filthy condition, a fact that is more quickly noticed by visitors from countries where a paper currency is not in use. While it is no doubt in the interests of the banks to use a paper currency still it is only right that they should take all reasonable precautions to minimize the dangers from such a system. The matter should receive the attention of the health authorities, who have now a very opportune time on account of the prevalence of small-pox to arouse the public to a proper appreciation of the dangers to which they are exposed.

ASEPSIS IN BARBER SHOPS.

Is it not about time the crusade in favor of ordinary cleanliness, not to mention asepsis, was carried into the barber shops? True, in some centres an agitation in the matter has taken place and some medical journals have called attention to the necessity for a change, but in most places there has been absolutely no improvement in the methods employed to prevent infections that are well known to be carried through carelessness in these places. The same brushes, combs, and various solutions are used indiscriminately; and often the same razors, straps, shaving brushes and soap, with the least pretence at disinfection. The ordinary barber probably never dreams of the necessity of sterilizing his hands after attending each customer. It is interesting while in the barber's chair to speculate on one's chances of escaping sycosis, seborrhoea or tinea, though, of course, those who are aware of the dangers expose themselves to them as seldom as possible. In these days of public interest in microbic diseases and knowledge of the dangers of infection it would be to the advantage of their trade if barbers learned something of aseptic methods and could make their customers feel assured that they carried them out.

THE SPITTING NUISANCE.

At a recent meeting of the Young Men's Liberal Club of Toronto, called by the President, Dr. J. E. Elliott, to discuss the subject of the Prevention of Tuberculosis, among other resolutions, one was introduced to ask the civic authorities to introduce regulations in order to attempt to control this disgusting habit. The great American Republic has gained the unenviable notoriety of being a nation of "spitters," so much so that in New York, Boston, and other cities, placards are posted in prominent places warning the people of the penalties for indulging in the habit. Large fines, from \$10 to \$500, and even imprisonment may be meted out to offenders, and police officers in plain clothes go out to watch for violation of the law in this matter.

Unfortunately a proportion of the Canadian populace appears somewhat given to the same filthy practice which the resolution wishes controlled by law.

That the habit is odious, disgusting, and at times dangerous to the public health, no one will deny, and as such should be discouraged in every way possible. It is quite probable at the same time, that the danger of the spread of infection by spitting on the streets has been overrated, as the drying and exposure to the sunlight of the organisms expectorated readily destroy them in most cases. The wisdom of the provision of such severe penalties as mentioned above is a questionable interference with the personal liberty of the subject and one can readily conceive of instances where it might be a genuine hardship.

The spitting nuisance is one of those things better dealt with by educating the public than by attempting to enforce abstinence by legal enactment.

PRACTICAL SYMPATHY FOR DR. CONERTY.

We have on several former occasions referred to the hardship inflicted upon Dr. J. M. Conerty, of Smiths Falls, in the prolonged defence of a suit for malpractice in which his brother practitioners best acquainted with the case consider him innocent of blame. We learn that a compromise has been made in the matter, the doctor paying \$600 in settlement of the claim. This is a most regrettable feature of the case but no blame can be attached to Dr. Conerty as he has defended his reputation and honor and that of the profession to the full limit of his resources. It merely illustrates the well known fact that, considering the financial loss, the injury to one's reputation and the annoyance connected with the

defence of actions of this sort, it is much cheaper to compromise, regardless of the merits of the case than to defend. Unfortunately every case thus settled is an incentive to further litigation, for there are always ungrateful and unscrupulous patients, usually paupers, urged on by even more unscrupulous and rapacious lawyers, of the shyster variety, who are anxious to extort blackmail. A Medical Defence Union that would ensure every action of this kind being fought to a fair finish would do more than anything else to discourage such litigation. We hope that some of our large medical associations will take the matter up at an early date, as a Medical Defence Union is one of the urgent needs of the profession in this country. We are pleased to state that at the last meeting of the Toronto Clinical Society, Dr. Conerty's case was brought before the notice of the Fellows by Dr. Wm. Britton, President of the College of Physicians and Surgeons of Ontario. The members were unanimous in their expressions of regret and sympathy and on motion of Drs. Hamilton and Anderson, a sum of \$25.00 was voted from the funds of the society and the treasurer was instructed to open a list to receive individual subscriptions to assist the doctor in defraying the expenses in connection with the defense of his case. It is to be hoped that the appeal in Dr. Conerty's behalf will meet with a hearty response from the profession in all parts of Canada.

NOTE.—Since the above was written we are gratified to learn from Dr. Conerty that no compromise has been made. He is determined to continue the fight and it remains to be seen if his professional brethren will stand by him. The question is one involving the interests of the profession at large, and as such is deserving of their serious consideration.

EDITORIAL NOTES.

Canadian Red Cross Representative in South Africa—

The following appreciative letters refer to Col. Ryerson's services in South Africa as Red Cross Commissioner.

LOCKINGE HOUSE, WANTAGE BERKS,

March 7th, 1901.

Dear COLONEL RYERSON,

I am very much pleased with the very ample and interesting report that you have furnished to the Red Cross Society. I look forward with great pleasure to the time when, owing to your successful operations on the staff of Lord Roberts and representing the British Red Cross Society, great harmony will exist between England and the Dominion. Lord Roberts speaks in the highest terms of your services and I, as chairman of the Red Cross Society, desire to add my testimony to that of the Commander in Chief.

I must also add my thanks for the deeply interesting pamphlet of your "experiences" during the war, kindly sent to me.

With kind regards, believe me

Yours very truly,

(Signed) WANTAGE.

P.S.—I am about to send you a proof copy of a photogravure of myself which has been reproduced at the wish of some of my friends from a portrait by Sir William Richmond. I shall be very pleased if you will accept it with my best wishes as a "souvenir".

Copy.

PRETORIA, 27th February, 1901.

My dear COLONEL RYERSON,

I trust you will pardon me for not writing and thanking you long before this for your very great assistance to us in our difficulties.

I have often intended to write but I could never secure a time when I could quietly sit down and say to you what was in my mind.

To others who have assisted me I could write appropriate letters of thanks, but you seemed to have placed on me a debt so large that I am unable to repay. I do, however, acknowledge it and I thank you sincerely in the name of the service to which I belong. You came to this country with most useful stores. You placed them at the disposal of the sick and wounded when and where most needed. Your work was most

untiring and unselfish and I fear will never be appreciated as it should be. I doubt, however, if this last will trouble you much,
If I ever visit Canada I will avail myself of the honour and pleasure of calling on you and I will I trust then have a talk over past events.

Believe me, yours sincerely,

(Signed) W. D. WILSON,

Surgeon Gen'l.,
Principal Medical Officer of
the Army in South Africa.

American Academy of Medicine.

The 26th annual meeting of the American Academy of Medicine will be held at the Hotel Aberdeen, St. Paul, Minn., on Saturday, June 1st, 1901, at 11 a.m. (Executive session: the open session beginning at 12 a.m.), and continuing through Monday, June 3rd.

The principal features of the meeting will be a symposium on "Institutionalism;" and another on "Reciprocity in Medical Licensure." Series of valuable papers on both topics have been promised, as well as interesting papers on some other subjects. The president's address (Dr. S. D. Risley, of Philadelphia) will be delivered on Saturday evening, June 1st, and the annual social session held on Monday evening, June 3rd.

Members of the profession are always welcomed to the open sessions of the Academy. The secretary (Dr. Charles McIntire, Easton, Pa.) will be pleased to send the programme, when issued, blank applications for fellowship, etc., when requested to do so.

A Substantial Medical Fee.

The daily press is authority for the statement that Dr. Walter C. Browning, of Philadelphia, rendered a bill for \$190,000 to the estate of Senator Magee of Pittsburg for medical services during the latter's illness. It is gratifying to note that our medical brethren in the great Republic are attempting to keep up the pace in the financial transactions in their country that are attracting so much attention of late.

Toronto Clinical Society Dinner.

About forty members of the Toronto Clinical Society dined at the Albany Club on Tuesday evening, April 22nd. Dr. W. H. B. Aikins occupied the chair and a most enjoyable evening was spent.

Article on Smallpox.

The article on Smallpox published in the last number of *THE LANCET* was kindly furnished us by Dr. W. B. Geikie, who should have been credited with the same.

The New York State Pathological Institute.

The State Lunacy Commission, it is said, has asked for the resignation of Dr. Ira Van Gieson, the well-known pathologist and head of the Institute. The commission claim that while research work of much scientific value has been carried on by Dr. Van Gieson and his associates, it has been of little practical value to the State hospitals. It will strike most sensible men that the Lunacy Commission is somewhat impatient in the matter of the results of scientific research, which certainly cannot be weighed out or measured off in definite quantities each year.

The Cause of Cancer.

According to statements appearing in the lay press, Dr H. R. Gaylord, of the University of Buffalo, claims to have discovered the cause of cancer. At variance with the opinions of the Italian school, that cancer is due to vegetable parasites, blastomycetes, Dr. Gaylord says the parasite is a minute form of animal life—a protozoon. It is stated that his observations and experiments prove beyond doubt the reliability of the discovery. The profession would have received the news with more confidence had it appeared in a less sensational way; nevertheless the appearance of an account of Dr. Gaylord's investigations in the medical press will be awaited with much interest.

The Peterboro Grave Robbing Case.

The case of William Patterson, a third year student of medicine in Queen's University, charged with opening the grave of a Mrs. Sheehan in the Peterboro cemetery and unlawfully, wilfully and indecently interfering with the dead body, in having it packed in a trunk and forwarded to Kingston for dissecting purpose, was disposed of by his Honor Judge Weller on April 22nd. The prosecution failed to prove that Patterson opened the grave, on which charge he was consequently discharged. On the other charge of indecently interfering with the dead body, Patterson was fined \$200, or in default, one year in gaol. The judge, in passing sentence, stated the law provided a sentence of five years in the penitentiary or a fine, at the discretion of the judge. Considering Patterson's previous good character and antecedents, he inflicted the lighter sentence.

The case is interesting as being the first of the kind to come before the courts of Ontario.

Counter Prescribing Druggists.

The appeal of the druggists fined at the Toronto Police Court for violation of the Ontario Medical Act by counter prescribing, was allowed by Judge Macdougall on purely technical grounds. The decision in no way establishes the right of druggists however, to practice in future.

Christian Scientists and Smallpox.

A person in Berlin, Ont., suffering from smallpox, according to recent statements in the public press, was for some ten days under the care of Christian Scientists before the health authorities were aware of the case. No doubt the disciples of Mrs. Eddy will consider absent treatment sufficiently efficacious henceforth with this patient.

Toronto Pathological Society.

At the last meeting of the Toronto Pathological Society the following officers were elected for the coming year:—

President, R. D. Rudolf; Vice-President, H. C. Parsons; council J. T. Fotheringham, W. H. Pepler and Wm. Goldie.

Toronto Clinical Society.

This society closed a very satisfactory year's work at the regular meeting on May 2nd, when the election of officers for the coming year took place, as follows:—

President, J. F. W. Ross; Vice-President, E. E. King; Corresponding Secretary, Arthur Small; Recording Secretary, Geo. Elliott; Treasurer, W. H. Pepler; Executive Committee, H. J. Hamilton, H. B. Anderson, H. A. Bruce, Geo. A. Bingham and W. B. Thistle.

Defaulting Practitioners.

Some 700 practitioners resident in different parts of Ontario who have neglected or refused to pay the \$2 annual fees levied on all Provincial licentiates, were recently notified by the Council of the College of Physicians and Surgeons that if they failed to pay up before April 19th their licenses would be suspended and they would then be proceeded against for continuing to practice without the proper qualification. A considerable number settled in order to avoid further trouble, but many who refused to do so have sent a deputation to wait on the Provincial Government. Precisely what they are after is not known. It is stated that the Government will ask the Medical Council to defer action until the misunderstanding is settled.

The Ontario Medical Association.

We would again direct the attention of our readers to the coming meeting of our Provincial Medical Association in the Normal School building, Toronto, on June 19th and 20th next.

Dr. Charles P. Noble of Philadelphia will read a paper on Complications and Degenerations of Fibroid Tumors with reference to Treatment.

There will be a discussion on Gastric Ulcer introduced by Dr. J. W. Edgar of Hamilton; a discussion on Empyema, introduced by Dr. Turnbull of Goderich and Dr. Ferguson of London; and a discussion on Extra uterine Pregnancy, introduced by Dr. Garratt of Kingston.

Dr. J. H. Elliott, of the Muskoka Sanitarium will read a paper on the treatment of Tuberculosis; Dr. Prevost of Ottawa one on Intraspinal Cocainization, and Dr. Osborne of Hamilton will speak of Field Service during the South African war.

The Committee on Papers will be glad to receive at an early date the titles of short papers on subjects of interest to the profession.

British Columbia Medical Association.

The next meeting of the above named Association will be held in Victoria during the second week in August and a cordial invitation is extended to any medical brethren from the east who may be visiting the Coast at that time to attend the meeting.

PERSONAL.

Dr. W. T. Yeo, Trin. '98, has opened an office in Parkdale, Toronto.

Dr. J. O. Orr sails for England shortly, where he will spend three or four months.

Dr. A. McPhedran attended the meeting of the Association of American Physicians last week.

Dr. J. J. Mackenzie has sailed for Europe where he will spend the summer doing pathological work.

Dr. Jas. Third, of Kingston, who has been ill for some time, we are pleased to learn, is gradually recovering.

We are pleased to report that Dr. E. E. King, who has been confined to the house for some time has quite recovered.

Dr. H. J. Way, of Chicago, a member of the resident medical staff, Toronto General Hospital 1892-3, was in Toronto, recently, attending his father's funeral.

Dr. Lelia Davis, Demonstrator in Histology, Woman's Medical College, leaves shortly to spend a few months in medical research work in Boston and Baltimore.

Dr. J. A. Couch (Trinity '87) who practiced for several years at Warsaw, Peterborough County, has taken up his residence in Toronto, opening an office on Sherbourne St.

Dr. J. A. McWillie and Dr. E. H. Stafford, of Toronto, who accompanied a sealing fleet to Newfoundland, have safely returned. They report a great catch and an exciting time.

Dr. Chas. M. Stewart, Trin. '99, a former member of the resident medical staff of the Toronto General Hospital, has been appointed Medical Superintendent of the Ottawa Protestant Hospital.

We are glad to learn that Dr. J. A. Temple, of Simcoe street, and Mrs. Temple, who received a severe shaking up from their horse running away, are both able to be about again.

Dr. H. A. Bruce's many friends in the profession will be pleased to know that he has quite recovered from his recent infection in the finger, received while operating on a case of appendicitis.

Dr. Leonard Vaux (Trinity '97) has accompanied the Canadian contingent to the South African Constabulary as surgeon. Dr. Vaux was surgeon to the Royal Canadian Artillery in South Africa a year ago.

We are pleased to note that Dr. H. E. M. Douglas, A.M.C., a graduate of Queen's University, Kingston, has been awarded the Victoria Cross for conspicuous courage in attending the wounded at the battle of Magersfontein.

Dr. McNicholl of Cobourg has been appointed medical superintendent of the new asylum for the insane in Cobourg, with Dr. Harriet Cockburn of Toronto as assistant physician. Dr. Cockburn is to be congratulated on being the first lady graduate in medicine to receive such an appointment in Ontario.

Among the recipients of honors for services in South Africa we notice the name of Lieut. L. E. W. Irving, son of Amelius Irving, Esq., K.C., of Toronto. Dr. Irving is a graduate in medicine of Trinity College, and on the outbreak of the war volunteered his services and accompanied the Royal Canadian Artillery. His conspicuous fitness as an officer and his excellent record were brought to the notice of the authorities with the result that he has received the Distinguished Service Order.

OBITUARY.

Dr. T. H. Little.

The peculiarly sad circumstances connected with the death of Dr. T. H. Little, of Spadina Ave., from smallpox, acquired while in the discharge of his professional duties, has called forth expressions of the deepest regret from all classes of the community. The doctor, who had not been successfully vaccinated, contracted the disease from a patient whom he was attending, and the attack developed into one of the confluent hæmorrhagic type, ending fatally in a week's time on April 24th.

Dr. Little was born in Owen Sound thirty-nine years ago, where he received his early education. He was a graduate in arts of Victoria University and in medicine of the University of Toronto, graduating in 1887.

Some years ago he was married to Miss Cooper, of Port Hope, who survives him. After graduation Dr. Little opened an office in Toronto, where he succeeded in establishing a large practice. He possessed in a high degree the confidence of his clients and the esteem of his brother practitioners.

Dr. Little was an Anglican in religion, and a prominent member of the Masonic fraternity.

Dr. Charles William Covernton.

One of the last of the physicians of the old school, men whose careers have reflected so much honor on the profession of this Province, and whose lives have been examples worthy in all respects of the emulation of future generations of physicians, passed away on April 17th in the person of Dr. Charles William Covernton.

Dr. Covernton was born in England in 1813, being the son of James Covernton, Esq., of Seven Oaks, Kent Co. He began the study of medicine in London, afterwards continuing it in Edinburgh University and St. Andrews, where he received his M.D. in 1835.

In 1836 Dr. Covernton came to Canada and shortly after took up the practice of his profession in the town of Simcoe. The Mackenzie Rebellion breaking out soon after his arrival, he offered his services as surgeon with the Loyalists. In 1869 Dr. Covernton was elected territorial representative of the Gore and Thames Division of the Council of the College of Physicians and Surgeons of Ontario, and in 1870 he became vice-president and in 1871 president of the same body.

He removed to Toronto about this time and was appointed to the professorship of Medical Jurisprudence in Trinity Medical College on its re-organization, which position he retained until a few years ago, when, owing to advancing years, he retired from active work, remaining, however, Emeritus Professor until the time of his death. Dr. Covernton took a keen interest in all matters pertaining to his profession, especially to public health. He held the position of president of the Provincial Board of Health and at various times represented the profession of the Province at foreign congresses.

In 1840 he married Frances Elizabeth, daughter of Hutchins W. Williams, banker, of Dublin, by whom he had nine children. Three sons, William Hutchins, Charles McKenzie and Theodore Selby, all deceased, entered the medical profession, the latter at one time being professor of Sanitary Science in Trinity College.

The funeral was largely attended by prominent members of the Toronto profession by whom he was held in the highest esteem.

Among Dr. Covernton's students in Simcoe was Dr. Charles O'Reilly, Superintendent of the Toronto General Hospital, who pays the kindest tribute to the memory of his old præceptor.

A gentleman of the highest honor, courtly in bearing, of polished manners, free from envy and petty jealousy and devoted to his calling, his career has shed lustre on the profession of Ontario and his memory will long be cherished.

Dr. John Wanless.

Dr. John Wanless, one of the oldest physicians in Toronto, died at his residence, 594 Huron street, on Sunday, in his 88th year. Deceased was born in Dundee, Scotland, and came to Canada in 1813, settling on a farm in Huron county. He practised in London, Montreal and Toronto. Two sons and two daughters survive him.

Dr. J. Archer Watson.

The lamentable accidental death of Dr. J. Archer Watson of Toronto on April 11th, came as a great shock to his many friends and acquaintances in the medical profession. He was riding out to Islington on a restive young horse that was just being broken, and on reaching the C. P. R. crossing at Dundas St., the animal became frightened and ran in front of a passing engine, throwing the rider to the ground. The base of the skull was fractured, producing instantaneous death.

Dr. Watson was born at Emery, Ontario, in 1856, his father being the late William Watson, Esq., superintendent of schools for west York.

He received his early education at Weston High School and afterwards at Jarvis street Collegiate Institute, Toronto. The deceased entered Trinity Medical College in 1881, graduating in 1885, after which he opened an office on Sherbourne St., where he resided at the time of his death. In 1889 he was appointed a demonstrator of anatomy in Trinity Medical College, a position which he held for some years. Dr. Watson was also one of the promoters and a member of the staff of the Toronto Western Hospital.

He was an enthusiastic lover of sports being a member of the Toronto Athletic Club, Ontario Jockey Club, Hunt Club etc.

The deceased was an Independent Conservative in politics, a Methodist in religion and a prominent member of the Sons of England and the Orange Order.

The funeral to Riverside cemetery, Weston, was largely attended by his friends and professional brethren, evincing the high esteem in which he was held and the deep sympathy felt in his sad taking off.

BOOK REVIEWS.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY.

Being a yearly digest of scientific progress and authoritative opinion in all branches of Medicine and Surgery, drawn from Journals, Monographs and Text-Books of the leading American and Foreign Authors and Investigators, collected and arranged with critical editorial comments by a staff of eminent American Specialists and under the general editorial charge of George M. Gould M. D. In two volumes treating of Medicine and Surgery respectively. Price \$6.00 cloth. Philadelphia and London. W. B. Sanders & Co 1901. Canadian Agents J. A. Carveth & Co., Toronto, Ont.

The preface of this work states that the innovation introduced last year of issuing the publication in two volumes, one treating of Surgery, the other of Medicine, was so generally regarded as an improvement, that the same plan has been adopted this year; the staff of editors of Departments remains the same, with the exception of the Association of Dr. Aloysius O. J. Kelly, (the well-known Philadelphia Pathologist,) with Dr. Riesman. The profession accordingly is offered as the 1901 issue, two handsome volumes of excellent typographical work, in good binding and of convenient size, the volume on Medicine containing 681 pages, and that on Surgery 610, with a comprehensive and convenient index, appended to each, while in foot-note reference is given the short title of the publication in which may be found the particular article reviewed.

The reception accorded the Year-Book in the past is sufficient proof of the value of such a collaboration, giving as it does a selection by competent authorities of subjects of importance, both to the general practitioner and to the specialist. Every year the profession is provided with an enormous array of medical literature in the form of text-book, monograph, journal and advertisement, much of which is merely speculative or knowledge ill-digested and statements unsupported and misleading, but much too is valuable were not the ordinary practitioner, either too busy or insufficiently equipped in scientific training to sift the good from the bad. This services the editor of the Year-Book undertake and they have done their work on the whole ably, choosing what is useful and practical on matters of general import and including too, much that is suggestive and interesting from the stand-point of scientific research.

The work is necessarily largely an index for reference, giving the subject and particular phase treated but on topics of general interest and importance the treatment is fuller. Where views not generally accepted or in the experimental or controversial stage are mentioned, the editor guards the reader by appending a critical note. The ordinary reader is thus kept in touch with the wealth of information which is constantly

accumulating from the labors of students in all parts of the world, but guarded from adopting immature suggestions as facts.

In the volume on Surgery, mention must be made of the references to articles treating of bullet wounds and of cocaine anaesthesia—subjects of special interest at present. The departments of obstetrics and gynecology are possibly the most valuable in this volume, especially the articles on the Pathology of Pregnancy. The volume on Medicine under the heading of typhoid contains a great deal of value on the Widal reaction, but readers in this country would like to have heard something with regard to the South African epidemic. The chapter on Pathology contains many new suggestions on neoplasms and that on therapeutics will be carefully read by the physicians bewildered by the claims of manufacturers of new preparations and specifics. The great majority of the references on Surgical subjects are to American Journals while on Medicine those of foreign extraction preponderate. Canadian Journals furnish but half a dozen references, a fact explainable partly by the comparatively insignificant amount of research work done here; but one cannot help suggesting that a better system of Hospital Records would assist in making the work done here available to our students and practitioners. A.J.M.

A SYSTEM OF PRACTICAL THERAPEUTICS.

Edited by Hobart Amory Hare M.D. Professor of Therapeutics and Materia Medica in The Jefferson Medical College, Philadelphia. Physician to The Jefferson Medical College Hospital. Second edition—revised and largely rewritten, Volume III, with illustrations. Lea Bros. & Co., Philadelphia and New York, 1901.

This volume deals especially with surgical Therapeutics. The first chapter—on Anaesthesia and Anaesthetics, is contributed by Dr. Charles Lester Leonard. The article is a full and thoroughly practical guide to the administration of anaesthetics and should be of great value to the practitioner. Dr. Charles H. Frazier writes a most complete chapter on Surgical Technique, dealing with surgical bacteriology, sterilization and disinfection, preparation for operation, preparation of ligatures, sutures, dressings, and the details of operative technique.

He also takes up the treatment of aseptic and septic wounds.

Fractures and dislocations are dealt with by Dr. Henry R. Wharton in an exhaustive article in which the latest and most approved methods are described. This article is very fully illustrated.

A very practical chapter and one that will appeal particularly to the general practitioner is that devoted to minor surgery and bandaging by Dr. Geo. W. Spencer.

Cerebral concussion and shock are discussed by Joseph Ransohoff F. R. C.S.

Surgical treatment in diseases of the respiratory organs is dealt with by Dr. A. J. McCosh, while Dr. Geo. Ryerson Fowler contributes a beautifully illustrated article on the surgical treatment of appendicitis, also other forms of peritonitis and strangulated hernia. As an illustration of

female development or of the nude in art, plate V may be very excellent but most observers will be puzzled at the necessity for so much display, and of the particular pose of a handsome figure to illustrate the site of the primary incision in appendicitis.

The treatment of obstruction of the intestines from various causes, haemorrhoids, fistula in ano etc., are fully discussed by Dr. Edward Martin.

Most useful and complete articles are those by Dr. Wm. T. Belfield on therapeutics of the male genito-urinary tract and by Ed. E. Montgomery on therapeutics of the genito-urinary diseases of women.

Diseases of the eye, ear, nose and throat and their treatment by the general practitioner will prove particularly valuable articles to those for whom they are specially written. These are dealt with by Drs. Casey Wood, S. MacCuen Smith, E. Fletcher Ingals, and A. Braden Kyle. The large number of formulae given in connection with these articles will prove especially helpful.

Altogether we take pleasure in repeating the high commendation of this volume which we have previously expressed in reference to former ones. The work cannot fail to prove of great use and is worthy of the most cordial reception by the profession.

H. B. A.

OBSTETRIC CLINIC.

By Denslow Lewis, Ph. C., M.D., Professor of Gynecology in the Chicago Polyclinic; President of the Attending Staff of Cook County Hospital, Chicago; President of the Chicago Medical Examiners' Association; Vice-President of the Illinois State Medical Society; Ex-President of the Physicians' Club of Chicago; Consulting Obstetrician to the Florence Nightingale Home; Senior Gynecologist and Obstetrician to the Lakeside Hospital, Chicago; Late Special Commissioner from the Illinois State Board of Health and the Health Department of Chicago for the Investigation of Municipal Sanitation in European Cities. A series of thirty-nine Clinical Lectures on Practical Obstetrics delivered to students and practitioners in Cook County Hospital, Chicago. Together with remarks on criminal abortion, infanticide, illegitimacy, the restriction of venereal diseases, the regulation of prostitution and other medico-sociologic topics. Octavo, 640 pages. Price, \$3.00. Chicago: E. H. Colegrove, 65 Randolph Street.

These lectures make extremely interesting and profitable reading. They are essentially practical, and though lectures delivered by the bedside or in the operating room to a class, upon material much of which must have come to hand simply in the ordinary course of hospital work, and without any possibility of arrangement, the author has succeeded in covering very thoroughly the vast majority of those accidents and conditions met with in the course of obstetric practice.

He might be properly classed as a Liberal-Conservative, who, while he is progressive and ever ready to avail himself of all that science and art may provide, does not allow himself to be carried away by fads.—

F. F.

Text Book of Histology, including Microscopic Technique, by A. A. Böhm, M.D., and M. Von Davidoff, M.D., of the Anatomical Institute in Munich. Edited by G. Carl Huber, M.D., Junior Professor of Anatomy and Director of the Histological Laboratory, University of Michigan. Authorized translation from Second German Edition by Herbert H. Cushing, M.D. Jefferson Medical College, Philadelphia. W. B. Saunders & Co., Philadelphia and London. A. J. Carveth & Co., Canadian Agents.

The volume opens with a chapter devoted to histological technique, the more useful and modern methods are emphasized, formulæ for stains and solutions are complete, directions for fixing, sectioning, cutting and staining are clear and concise.

The structure of the cell in which the subject of Karyokinesis is embodied is set forth in a manner very pleasing to read and is followed by a description of the various elementary tissues with special methods of preparation applicable to each.

The nervous system usually demands considerable space in a work of this character. Here, however, the space is surprisingly small, but equally surprising is the effective manner in which the subject is handled and the clearness with which it is set before us.

Professor Mall's observations on the splenic lobule constitute something new in the histology of this organ.

Following the section on the blood and blood forming organs, valuable hints are given in the way of technique in their study.

The sections on the alimentary canal and genito-urinary tract are clearly put and well illustrated, the description of the supra renal capsules is perhaps particularly worthy of mention.

The work closes with extensive references to literature. The essentials of a work on histology are clearness of description and illustration, with well directed instructions to the students as to how to proceed in his investigations, and equally clear directions as to what to use, exact formulæ, and how to use them.

This volume embodies these points and should render much assistance to those engaged in the study of histology.—H. C. P.

DAVIS'S OBSTETRIC AND GYNECOLOGIC NURSING.

By E. P. Davis, A.M., M.D., Professor of Obstetrics in Jefferson Medical College and Philadelphia Polyclinic. 12mo. volume of 402 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Canadian agents: J. A. Carveth & Co., Toronto. Price \$1.75 net.

As a text book for nurses this work is admirable, giving all that a nurse should know, at the same time avoiding those things which concern the physician alone, and in connection with which a little knowledge is more apt to be dangerous than useful.

The first half of the work is devoted to obstetrics, and its perusal cannot fail to be of interest and value to anyone assisting at a confinement or having the care of a pregnant or puerperal woman.

The cuts are mostly found in this part of the work, and have been carefully chosen and well executed.

The second division of the book is devoted to gynaecology, and is in no way inferior to the first.

The publishers' work is throughout excellent.

F. F.

A TEXT BOOK OF GYNAECOLOGY.

Edited by Charles A. L. Reed, A.M., M.D., Gynaecologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital, President American Medical Association, Etc., Etc. Illustrated by R. J. Hopkins. New York: D. Appleton & Co. 1901.

This work is a strictly up-to-date volume, and reflects much credit upon the author.

In its preparation the efforts of some thirty contributors, comprising many of the best known writers and teachers of the subject in Great Britain, United States and Canada, have been utilized in such a way as to produce a complete text book, and not simply a collection of monographs.

There are three hundred and fifty-six illustrations which, with very rare exceptions, are new. The paper is good and print clear; in fact, the whole work is creditable alike to contributors, editor and publisher.—

F. F.

Surgical Pathology and Therapeutics, by John Collins Warren, M.D., LL.D., Professor of Surgery in the Massachusetts General Hospital. The second edition with an appendix, containing an enumeration of the scientific aids to surgical diagnosis, with a series of sections on Regional Bacteriology. Published by W. B. Saunders & Co., Philadelphia. Canadian Agents, J. A. Carveth & Co., Toronto.

The second edition is indeed welcome, as it brings up to the present all new facts and many suggestions on the pathology and therapeutics of surgery. Every one should possess a work so carefully prepared as the one by the eminent author. The association of the pathological conditions present in each case, with the symptoms and the indications for treatment must of necessity be of great value to the student of surgery. The opening chapter on Bacteriology, with the excellent plates prepared by Wm. J. Kaula is to a good introduction to the chapters on inflammation and its sequelae, tuberculosis, diseases of bone, tumors, malignant and benign, and each receives its due share of attention. The appendix is most valuable, as it deals with the scientific examinations of the blood and the various excretions and secretions of the body and other methods of precision which give exact data to arrive at diagnosis, prognosis and rational treatment. Such a work is especially valuable to the practitioner.—C. A. T.

FISCHER - INFANT-FEEDING IN HEALTH AND DISEASE.

A Modern Book on all Methods of Feeding. For Students, Practitioners and Nurses. By Louis Fischer, M.D., Attending Physician to the Children's Service of the New York German Poliklinik; Bacteriologist to St. Mark's Hospital; Professor of Diseases of Children in the New York School of Clinical Medicine; Attending Physician to the Children's Department of the West-side German Dispensary; Fellow of the New York Academy of Medicine, etc. Containing 52 Illustrations, with 16 Charts and Tables, mostly Original. 368 pages, $5\frac{3}{4}$ x 8 inches. Neatly Bound in Extra Cloth. Price, \$1.50, net. Delivered. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia, Pa.

This little book devotes the first few chapters to a consideration of the anatomy and physiology of the digestive organs in the infant and to the various constituents of foods. A useful chapter on the bacteria associated with diseases due to digestive troubles in the infant comes next.

The subjects of mothers' milk, wet nursing, weaning the infant, cow's milk and its modification, management of the nipples and breast, substitute foods for milk, sterilization and pasteurization of milk, etc., are fully discussed. Dietetic management of colic, constipation, rickets, etc., is also considered, with directions for preparation, suited to different conditions, is furnished. Altogether, the book contains a vast amount of exceedingly valuable information in a concise form that will be very readable.

PUBLISHERS' DEPARTMENT.

Ptomaines.

One of the leading specialists of the South, Dr. W. L. Bullard of Columbus, Ga., concludes a highly interesting and instructive article on Ptomaines in the following manner:—"In all my twenty years' experience at special work, where the quick and safe relief of pain is the object of treatment, I have found nothing to equal five-grain antikamnia tablets. This remedy is not only a foe to ptomaines and their absorption, but is also a corrective in cases of poisoning by food-decomposition. As purely pain relievers, these tablets of course are recognized the world over as non-cardiac depressants, and free from any tendency to produce habit. I would also call the attention of the profession to those instances wherein it is strongly advisable to rid the system of the offending materies morbi as well as to correct their harmful influences whether it be in the poisons of food decomposition or the absorption of ptomaines. In such cases I know of nothing better than Laxative Antikamnia Tablets. These tablets judiciously administered, rid the system in a perfectly natural manner of the offending material and lessen therefore, the quantity of medicine necessary to be taken by the patient, and produce no disturbing influences on the delicate molecular interplay of the nervous structure."

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THE CANADA LANCET

VOL. XXXIV.

TORONTO, JUNE, 1901.

No. 7. 10

ORIGINAL ARTICLES.

A CASE OF DEFORMED LEGS.*

By G. A. BINGHAM, M.D.,

Surgeon to the Toronto General Hospital, St. Michael's Hospital, Sick Children's Hospital, etc.

G. T., male, age 14 years, born at Uxbridge, Ont., was admitted to the Hospital for Sick Children on January 21st, 1901. Family and pre-



vous history are unimportant. His present condition is as follows:— Strong, well-nourished boy, with bright complexion. Upper half of his

*Reported by Dr. E. S. Ryerson, House Surgeon, Hospital for Sick Children.

body is unusually well developed, being very muscular in his arms. Circulatory, respiratory, nervous and genito-urinary systems are all normal.

Right leg,—the femur and patella are normal in their relations. The leg is rudimentary, but one bone being present and forming the prominence at the knee and external malleolus. There is a dislocation of the leg outwards at the knee, so that the whole surface of the inner condyle of the femur can be plainly felt beneath the skin. The leg cannot be extended beyond a right angle, but can be fully flexed. The foot is rolled inwards at the ankle so that it lies on the inner side of the lower extremity of the leg, with the sole looking upwards. There are only four metatarsal bones and four toes. The muscles are small and flabby from lack of use.



Left leg,—is normally developed; the knee is quite normal with some undue prominence of the head of the fibula. The bones of the leg are twisted spirally, as if the knee had been held firm and the foot forcibly twisted inwards. Both malleoli are very prominent, the inner bone being on a much lower level than the outer one and being the part of the foot which is walked upon. The foot is turned inwards. It is dislocated upwards between the tibia and fibula, causing a limitation in the movements at this joint. The metatarsal bones are curved with the concavity on the inner side of the foot.

On January 29th the patient was anaesthetised and the right leg disarticulated at the knee, using the Stephen-Smith flap method. An excellent stump resulted, the flaps meeting well behind the knee.



For some years the patient has been accustomed to walking on crutches, which were merely single poles with axillary pieces. The right foot was twisted around the crutch and could hold it almost as well as a hand. The left foot was walked on, the internal malleolus bearing most of the weight.

On February 12th he was again operated on. An incision was made on the inner side of the leg over part of the tibia which was most slender. An osteotomy was done on the tibia with difficulty as the bone was very hard and ivory-like. The deformity could not be overcome, so the fibula was also divided. When both bones had been broken, the foot was twisted straight and put up on a posterior rectangular splint.

On March 5th leg was taken off the splint and put up in plaster of Paris. There was some union of bones but not enough to support the weight of foot.

On March 26th a subcutaneous tenotomy of the tendo Achillis was done and the foot brought more to a right angle with the leg. It was put up in Plaster of Paris again.

On April 24th tendo Achillis was again divided and the foot brought still more into position.

The position of the foot at present can be seen in Fig. 3. The bones have united firmly.

THE DRINK EVIL.

By NOAH E. ARONSTAM, M. D. PH. O.

Assistant to Chemistry and Dermatology, Michigan College of Medicine and Surgery, Member Wayne County Medical Society, Detroit, Detroit Med. Soc. etc., and

LOUIS J. ROSENBERG, L. L. B.

Member of the Historical Soc. of Lane & Ches., Liverpool, England, member Medico-Legal Society, New York N. Y., etc.

Wine-making and wine-drinking have as most things been discovered by accident. An earthen vessel containing some half-crushed grapes was forgotten somewhere in a nook and left to ferment. The youngster ever looking for mischief and adventure has given the effervescing beverage due relish and partially intoxicated, came back to his parents. Upon the discovery of the cause of the child's intoxication, the parents too were not loathe to partake of the potion, experiencing of course, the same exhilarating effects. Thus drinking and the making of drink occurred simultaneously and ultimately developed into an established habit.

The history of drinking and its habits are very ancient. The discovery of alcohol, like the invention of gun powder, may be ascribed to the alchemists and monks of the 12th century. The credit of first making liquors from fermented grain, belongs to the Arabians. The first case of inebriety is related in the Bible, (Gen. IX, 20, 21.) The Spartans, in order to make manifest the abominable effects of drunkenness exposed their slaves while in a state of intoxication, to the disgust of the spectators. Heroditus as early as 500 B. C., had cause to protest against a strongly prevailing inebriety. "Drunkenness," he said, "showeth that the mind and soul were sick." Rome, once the mistress of the world, caused its ruin by the adoption of Bacchannalianism. The fall of Hannibal's army was due to the wines of Capia.

Alexander, the Macedonian, the military wonder of antiquity, was cut off from his career at an early age by the indulgence in wine at one of his celebrated feasts. So too, can the decline of Assyria, Persia, Babylonia, Macedonia and Greece be ascribed to too much wine drinking.

Nor was wine the only beverage of ancient times. The famous historian, Tacitus, states that ale and beer were much in vogue among the Teutonic tribes of his period. The ancient monastery, like the one near the Wartburg, immortalized by Scheffel in his "Ekkehard," did not altogether abhor the use of spirits. The conquering Huns too soon acquired a strong taste for liquors. Even so great a man as Martin Luther had the boldness to assert that without wine, song and woman, the wisest man remains a fool.

This brief historical review sets forth the universality of the drinking habit. How this habit has in time established its control will now be the effort of our inquiry. As long as human beings were unaware of the effect of this great stimulus, alcohol, no additional measures were demanded to sustain activity. The knowledge of the action of spirits has given man a means wherewith he may become more daring and

potent. The force of this habit varies with governmental systems, inevitable fatalities, industrial pursuits, and the presence or absence of artificiality. As long as a nation is free from internal discrepancies, as long as the organism is aware of its mission, stimuli are unnecessary. Should disunion attack the national spirit, should individualism come forth in its naked and brutal facies, stimuli, at once, recommend themselves and thus nations sometimes become victims to debauchery. As a corroboration of this statement, we refer to the Reign of Terror. So too, the ingression of certain national catastrophies mercilessly decimating the ranks of communities is an efficient cause for the establishment of the habit of drinking. We see this well illustrated in the outbreak of the plague which occurred in the Thirteenth Century, and the terrestrial cataclysms like the one seen in the outbreak of Vesuvius and that of the Lisbonic earthquake. Further illustrations are the Thirty and Seven year wars. Again, the demands which agriculture, industry and the strain of a constant and incessant progress put upon man, exhaust his vital forces and weaken the great nerve centres. As long as ordinary work compensates the wants of Nature and the arising necessities, stimuli are not necessary, for Nature compromises *per vis resistentiae naturae*. With the advent of altered environments and the demand for more expenditure of force, stimuli become indispensable and man is compelled to resort to the first best artificial invigorator, alcohol.

Though the drinking of spirits may not amount to a habit for some time its constant repetition, augmented by worry, work and unsatiated ambitions may develop into a craving. Accompanying this craving, the organism undergoes a retrograde metamorphosis, a devitalization, until it finds that natural means and ways are no longer suitable to sustain the demands of the economy. Hence a path of perverted functional activities is opened; a lack of force throughout the body is manifested, which cannot by all possible efforts assimilate the pabula for its nutrition and further maintenance. Thus human beings grow artificial; the various organs and structures must be continuously urged and encouraged to functionate; fear for work, monotony of life, indolence and languidity of both body and mind are the usual sequences of such a state of affairs.

Again, artificial stimuli of any sort are conducive to certain pathologic states in the central nervous system. On the one hand, the nerve cells which by the use of intoxicants, lose their resiliency and no longer responds to the central wave of nerve force and conductability, but remain in a state of passivity amounting almost to total inaction. On the other hand the force resulting from the periphery does not reach the neuron, and cannot therefore be transmitted to the great reservoir of energy—the brain. Man thus acquires a perverted, unresponsive nervous mechanism, which demands a constant artificial stirring, a continuous oiling of the wheels of the machine, i.e. a repeated consumption of the stimulating agent, which finally leads to an ineradicable habit, a morbid taste, a second nature.

Doctor T. D. Crottes puts a great deal of stress upon what he calls "hereditary inebriety," claiming that "the hereditary inebriate is born

into the world with a low power of vitality and states of central brain exhaustion, which are ever seeking relief; and alcohol, by its narcotic action, supplies the demand. This impulse to degeneration may pass down one or two generations before appearance as inebriety again." We however, cannot concede to the existence of a so-called hereditary inebriety, notwithstanding the plausible and scientific precision Dr. Crottes would like to stamp it with. A direct parental transmission of inebriety, or rather of the drinking habit is just as impossible as the direct parental transmission of morphinism or cocainism. Still, to do away altogether with his theory would be unjust. To be sure, inebriate parents may transmit defective morbid impulses, an abnormal mentality, a debilitated body, a perverted nervous mechanism and mal-developed organs, which will but imperfectly perform their offices but *never* can such parents *directly* implant the morbid desire for any stimulus, particularly so for alcohol.

Having obtained some glimpses of the history and the causes of the drink evil, we may now appropriately ask, what is alcohol? To answer this question we must first analyze its chemical composition, and secondly investigate the range of its activities.

Alcohol is an organic substance belonging to the group of hydrocarbons, in which the radicle hydroxyl is chemically incorporated with the base ethyl. That is to say, it is a hydrate of ethyl, or ethyl alcohol— C_2H_5OH . Chemically, therefore, it contains all the elements entering into the composition of starch and sugar substances so absolutely necessary for nutrition and for the creation of heat and force. Thus we see that alcohol contains the elements of a food. Whether it really is such we shall now critically examine.

To carry on this investigation with tolerable precision we must ask ourselves, what is a food? This may be defined to be a substance which, when ingested, furnishes the body its natural constituents, or contributes to the elaboration of available force and heat, thus acting as a nutrient. Nutrients, again, are of three kinds:

1. Nitrogenized or albuminuous food stuffs,
2. Carbo-hydrates or starches, and
3. Hydro-carbons or fats.

The first kind lends to the body its musculature and force, the second kind furnishes it with heat and force, and the third kind contributes to the rotundity of the body and gives tone to the nervous system by supplying it with phosphorized fat.

Judging alcohol from chemical composition we find it to simulate the starches very closely. That the latter are the chief sources of heat and energy cannot be disputed. Now, the question arises, is this equally true of alcohol? We will answer this by describing its physiological action. But before doing so it may not be amiss to state that the ingestion of starches and sugar indirectly contributes to the formation of alcohols and ethers within the gastro-intestinal tract, being absorbed as such. At a first glance at the formula of starch or sugar we notice that they can be readily converted into alcohols by the primary action of acids, and the secondary neutralization of the salt by alkalies found

in the alimentary tract, thus giving rise to a higher or lower series of alcohols. We now return to our description of the physiologic action of alcohol.

Small doses of alcoholic beverages, when taken before meals, will invariably stimulate the appetite, augment the gastric secretion and favor peristalsis. After having exerted its action upon the alimentary tract it is absorbed and enters the circulation. There it is attacked by the oxygen-carrying erythrocytes, which convert it into heat and energy, simultaneously liberating carbon dioxide and aqueous vapor by the pulmonary and integumentary apparatus.

Alcohol is thus completely assimilated by the economy and utilized as a means for calories. Hence alcohol could be classed among the foods. Still the amount of alcohol which undergoes combustion is very small compared to that which remains in the system and produces the well-known re-action. True alcohol upon coming in contact with the medullary centers will invoke an increased activity of the respiratory and circulatory functions which would undoubtedly lead to the inhalation of a greater supply of oxygen. The red blood cell, however, tasked to the utmost, finally assumes a semi-paresis, so to speak. To be sure alcohol primarily will stimulate the function of the central nervous system as well as of the vaso-motor apparatus, thereby augmenting the diverse secretions of the body, temporarily stimulating the mind, intellect and imagination, creating a powerful influence upon the various emunctories of the organism, in short, producing a *bien être* of longer or shorter duration. In this manner it indirectly contributes to the nutrition of the body. As already intimated the red blood corpuscles are deprived of their normal stability; they can no longer carry the vitalizing oxygen as thoroughly as before. Their motility is considerably diminished and the body enters a state which has been termed sub-oxidation. Individuals grow fat and this obesity also involves the manifold organs of secretion and excretion. The liver, spleen, kidney and heart undergo fatty infiltration or degeneration. The brain too, participates in the bodily confusion and mental deterioration is its direct sequel. The beverage continued, the misery increases, and we finally enter into a state of affairs where body and mind no longer co-operate effectively. A shattered nervous system, a depressed circulation, an advancing mal-nutrition brings about pathologic states and structural lesions in the nerve unit.

Still, happy for those who so end. Much woe and endless misery to the many who fill our prisons as criminals paying the indemnity of alcoholism. Again, were the disaster to end right here we would perhaps say, "forebear;" but alas, in countless instances, inebriate parents transmit all their moral and physical infirmities to the offspring, which infirmities are not infrequently conducive to many a criminal tendency. Doctor Louise E. Rabinovity, of Paris, France, has made an examination of the relation of criminality in the offspring to alcoholism in the parents. This examination has revealed the following statistics: The Alosys Asylum, of St. Anne, Paris, shows an average of 50 per cent. in which criminal children can be traced to the existence of alcoholism in the parents; the Elmira institution at Elmira, N.Y., shows a percentage of 48 ascribed to the same cause.

Vagabondism, too, is almost solely due to the continuous indulgence in liquors.

This completes our discussion of the bio-pathologic aspect of the drunkard. We shall now proceed to give the general rules expressing his legal status.

Lord Coke classed all drunkards under the class of *non compos mentis*. Hence all contracts entered into with drunkards were void. This was the common law. Nevertheless, strangely enough, drunkards were held to be responsible for all criminal acts without any reference to the *intent* or *consciousness* of such acts. In fact, drunkenness was usually considered an aggravation of the crime. (See Frost case, 22 St. Tr. 472, Rex vs. Carrol, 7 c. and p. 115. See American decisions, People vs. King, 27 Cal. 507, State vs. Johnson, 40 Conn. 106).

At the present time, contracts made by persons intoxicated, whether voluntary or involuntary, are not void but voidable, at the option of the party intoxicated; provided, of course, he is able to show that he was so intoxicated as to have incapacitated him from making the contract. The drunkard's criminal status has also been materially changed. While voluntary drunkenness is no excuse, it never aggravates an offence. (See McIntyre v. People, 28 Ill. 514.)

Drunkenness may also be cited to show the degree of the crime, as in a prosecution for maliciously shooting, evidence that the defendant was so intoxicated that he could not form an intent to wound, is admissible. So too is it admissible to show that drunkenness made him physically unable to commit the crime. (Ingalls vs. State, 48 Wis. 647).

Intoxication is always available to disprove a specific *intent*, such as passing counterfeit money with intent to cheat, or an assault with an intent to murder, or to do bodily harm and the like. (Roberts vs. People, 19 Mich. 401, Real vs. People, 42 N. Y. 270.)

Of course, it need not be emphasized that if a person be made drunk, by fraud or stratagem of another, he is not responsible for his acts. This is certainly understood. So too, he is not responsible if he is made drunk by the unskillfulness of his physician. And a man, owing to temporary debility or disease, maddened by the quantity of wine which he usually takes in his normal condition, is not voluntarily insane, and hence not responsible. (Roberts vs. People, 19 Mich. 401; State vs. Johnson, 40 Conn. 136).

We have now discussed almost all the vital points of the subject. From all that has been said hitherto, the disastrous effects of alcohol are prominently evident. The tendency of alcohol to undermine the body and mind has always been alarming. The homes that it has marred, the affections that it has robbed, the happiness that it has destroyed are both multitudinous and appalling. This being so the State has been requested to suppress the liquor traffic. The advocates of these suppressive liquor laws, as we may call them, usually give something like the following arguments as reasons for their adoption:

(a) The aim of the State has been from time immemorial the production of the greatest happiness for the greatest number. Intemperance destroys happiness, hence the State ought to suppress the liquor habit.

(b) Every individual owes liberty to the other, and no one ought to be permitted to carry on a business which directly or indirectly causes man to hamper or obstruct the stream of liberty.

(c) That the liquor traffic is very invasive, always expanding beyond its assigned limits.

(d) That it is nothing more than a luxury, not a necessity. And like all luxuries, the supply creates the demand and not the demand the supply.

These arguments have met with some success, and a number of cities and states have adopted prohibition laws. The first prohibition state was Maine, adopting those laws in 1851; next was Vermont, in 1852. In New Hampshire it was adopted in 1855, but as to its sale only, not as to its manufacture. Later on, Rhode Island, Kansas and Iowa and a number of counties in most of the other states have also adopted prohibition laws.

The pro-liquor element, on the other hand, strongly opposing both suppressive and restrictive liquor laws, usually advance these arguments:

(a) Suppressive or restrictive laws curtail the liberty of a certain number of individuals, while it makes others guardians over such individuals.

(b) That it encroaches upon the management of a business which supplies a demand or luxury to a certain number of consumers, and which by so supplying them, employs no more fraud or illegitimate adroitness, than any other commercial enterprise.

(c) That reformation if any at all is necessary, should be carried on among the consumers rather than among the suppliers; for as long as there is a demand for an article there will surely be a supply. To rid the world of liquor you must destroy the demand.

These two set of advocates constitute the extremists. Besides these extremists there is another class which we may term the "high license class." This class comprises the greater number of the reformers of the liquor problem. Their theory is that far-off idealism must give way to practical expediency. Until the total suppression of liquor will find favor with the majority, we must satisfy ourselves with restrictive measures. The hour is too late to question the magnitude of the liquor traffic and the power of the liquorelement. The national outlay for liquor is estimated to be over a thousand million per annum. The vote of the liquor element of Greater New York alone is about 150,000. A third of the members of the legislatures is composed of men sent by them. A third of the saloons are headquarters of political clubs and assemblies.

(a) They therefore argue, that high license tends to decrease the number of persons conducting the liquor business, thus weakening their influence in affairs governmental.

(b) It brings the traffic under the control of more or less responsible individuals.

This scheme of high license has found favor in the majority of the states.

In addition to the several classes mentioned, there are also those who would have the liquor traffic as a governmental monopoly. There are

also religionists, and a host of others too numerous to mention, who are incessantly seeking the reformation of inebriates by prayers, establishments of missions, etc.

It is certainly true, as the pro-liquor advocates claim, that the liquor business is no more illegitimately conducted than most of our other commercial pursuits. It is also true that alcoholic beverages are mainly consumed as luxuries. Nor can it be denied that high license is of great beneficency. So too are we unable to deny that moral suasion has been of some use in certain individual instances. Still there is much in the doctrines of each and all of those advocates to which we are forced to take exception.

If the State is not to interfere with the management of the liquor traffic, because in doing so it may curtail, as the pro-liquor element put it, their liberty, it will have to take "hands off" so to speak, of almost everything within the domain of human conduct. The worst criminal could use the identical argument with the same amount of logic. "What right has the state to interfere with my private affairs, it is a curtailment of individual liberty,"--might he well argue. Again, should the State endeavor to do away with the entire liquor business, it is reasonable to expect that by doing so, the State will not only become tyrannical and involved in the destruction of private property, but will really "beat its own head against the wall. For, an absolute prohibition of liquor at the present time is bound to make men more persistent to use it. Stolen fruits are always sweet. Again the high license method, while it may sometimes be an improvement, often encourages ardent efforts on the part of the liquor men to become potent. So too, government monopolies are more often a failure than a success. Take for instance Russia as an illustration. There it is in vogue more or less, yet there are not the least signs of the decrease of drinking. So too, religious workers have never been of much effective service, as Mr. Augustin Abbott in his "Necessity for Medical Supervision of Criminal Arrests", read before the Medico Legal Congress, September, 1895, rightly said: "Moral suasion has been tried and though it may have prevented much and cured some individual cases, it fails to accomplish the service which the community needs."

The same author concludes the paragraph by asking: "Is it not time now that scientific suasion should be tried?" This query must be answered in the affirmative, for it is indeed scientific suasion and scientific suasion only that could lead us to the proper solution of this much-vexed problem. Science and Science alone, "can instruct the community how to deal with it by measures directed towards diminishing the sources. It would be futile in the present state of public opinion to propose measures for prophylactic treatment of crime, but is it premature to propose such measures in a practical form in respect to dealing with inebriety?"

The last sentence is a question put by Prof. Abbott. In answering the same we would state that it is *not* altogether premature to propose measures for prophylactic treatment of crime, much less is it to propose such measures in a practical form in respect to dealing with inebriety. The main remedy is beyond question in the nature of a prophylaxis.

It is, however, but practical to have some regulations of the liquor traffic in addition to our preventative measures. The following regulations of the liquor traffic have met the approval of the most-thorough students of the problem.

(1) First, moral qualifications for licensees.

(2) Second, limit to the number of licensees that is to say, grant no license to a new saloon keeper unless a vacancy has occurred by the going out of business of another. This measure is in vogue in Pennsylvania, Boston, New York, etc.

(3) Third, liability in damages, that is to say, for all injuries sustained, the saloon keeper should be pecuniarily liable to the parents and guardians of the minor, and to the wife and family of the man. This measure is now in force in almost all the states of the union.

(4) Fourth, rules of sale; no one should be allowed to sell liquor and run some other in business in conjunction with it; nor should anyone be permitted to sell liquors to minors, aliens, women, and habitual drunkards; nor on any holiday; and on no day later than 11 p. m.

(5) Fifth,—a special tax should be imposed upon all the manufacturers and vendors of liquor to defray the expenses of asylums built for the treatment of alcoholics and dipsomaniacs.

So much for the regulation of the traffic of liquor; and now, a word on the treatment of inebriety. The benefit derived from drugs is questionable, for the craving remains as intense under the exhibition of medicines as without it. Still a tonic course of treatment may be tried, preferably the bitter tonics and mineral acids. In no wise should a physician adopt such a regime, which is apt to eventuate in a new habit, thus substituting one craving for another. Good hygienic and sanitary surroundings and out-door exercise should go hand in hand with the above treatment.

Hospitals for inebriates and asylums for dipsomaniacs should be instituted in every community by the Government. The benefit of such institutions has long ago been proven. The first asylum for inebriety was founded in 1854 by Dr. J. E. Turner, and assisted by the renowned surgeon, Dr. Valentine Mott. Since then, there have been established many institutions of like nature. Few of them, however, have accomplished their designed purposes. In many of them the attendants get no salary, and as a result the patient receives very inefficient service. Some of these asylums, again, are not properly graded. Institutions of this sort should employ nine but the most competent assistants and should be graded according to degree and severity of the malady.

In order to ascertain the grade to which the particular inebriate belongs, the aid of the physician and probation officer should be invoked. Probation officers should be appointed in every fairly populated city, who should investigate for the information of the court, the previous records of persons arrested for drunkenness, should keep records of such investigation, and also of all cases placed on probation.

Still, as we have said before, all these measures do not go to the root of the evil. While such institutions as the Washingtonian Home, Boston, Massachusetts, or those that we have in mind and have described

above, may have cured some hard cases, the main remedy is in the nature of prophylaxis. Though these institutions are so, to some extent, that is to say, they do prevent the spread of the disease, yet they are mainly for those already afflicted. To prevent the visitation of inebriety upon future generations, we must not only establish such hospitals as above mentioned, but institutions that will take the place of the saloon.

We all want stimulation and recreation. Recreation is change of tension. Bodily and mental fatigue is best treated by variety. Furnish us with mild and innocent stimulant, and the more dangerous one, liquor will fall in disuse. Free concerts and public theatres of an instructive and entertaining nature, superintended by a committee of literary men appointed by the municipality may be conveniently established. Public clubs, where debates and games are held, and finally and mainly, social guilds, should be built in various parts of every city.

In conclusion, we cannot do better than express our hope with Dr. Quimby, that: "the irrepressible conflict now inaugurated between drunkenness and sobriety" will go on "until that righteousness which exalteth a nation shall prevail."

SELECTED ARTICLES.

IMPERFECT OR DEFICIENT URINARY EXCRETION AS
OBSERVED IN CONNECTION WITH CERTAIN
DISEASES OF THE SKIN.

BY L. DUNCAN BULKLEY, A.M., M. D.,

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The relation between the skin and the secretion of the kidneys is a matter of every-day observation in general medical practice. All are familiar with the temporary changes in the urine which may take place from a chilling of the surface, and all are equally familiar with the relief given to congested kidneys by free diaphoresis.

The converse, however, has not been as freely recognized and known, and the relations of the kidney secretion to the integrity of the skin and its functions have not been as clearly demonstrated; nor, indeed, can this be expected until more data have been collected.

It is with a view of contributing to the subject that I wish to present a study of two thousand analyses of the urine of skin patients, which have been made in my office during the last ten years, mainly by my associate, Dr. H. H. Whitehouse, to whom I am also indebted for much laborious effort in their subsequent compilation and analysis. I may state that these urinary analyses were not made with any view to such a study as the present, nor to demonstrate any particular point in medicine, but simply in the ordinary run of my private cases, in order to better direct their treatment.

Nearly twenty-five years ago the present writer called attention to "The Relations of the Urine to Diseases of the Skin,"* giving analyses of over three hundred specimens, relating to a hundred and more patients, and since that time he has constantly employed urinalysis as an efficient aid in the understanding of the general physical condition of many of those exhibiting disease on the skin. During the earlier years the analyses of the urine related mainly to the specific gravity, acidity, albumen, sugar and microscopic elements; but for the last four years they have been much more complete, including urea, the determination of the percentages of the various salts of the urine, also observations as to indican, urobilin, etc., as will appear later; nearly a thousand of these later, very complete, analyses have been made.

In most instances analyses were made of two specimens at each time, one of the urine passed on retiring at night, and one of that passed on rising in the morning; in some instances there was an analysis of a sample of the total urine voided in twenty-four hours.

It will be observed that the title of the paper refers to "imperfect or deficient urinary excretion," and not to actual disease of the kidneys, and our study relates rather to functional derangement of the urinary secretions, many of which are quite within the limits of moderately good

* *Archives of Dermatology*, October, 1875.

health. Indeed, it is a little remarkable how very seldom there has been found real kidney disease, manifested by albumen, or renal casts, or glycosuria, although all these features have been diligently searched for. Our studies, therefore, relate mainly to kidneys not organically diseased, and fortunately so, for the results of our therapeutics.

But a consideration of the changes which are found in the urine from kidneys not organically diseased may often be of the greatest importance in regard to the life and health of the patient, as indicating the manner in which the processes of assimilation and metabolism are carried out; and in this way I regard them of the greatest value in connection with the proper care of patients affected with many diseases of the skin.

It is understood that I do not claim that the urinary changes to be spoken of are the direct cause of any of the diseases referred to; but experience has shown that they do enter as a factor in the proper understanding of the physical condition of the patient, and are often directly associated with exacerbations in the skin trouble. It is also to be understood that these alterations in the urinary secretions are not generally to be considered as evidences of faulty kidney action so much as of errors of metabolism in the system, often dependent upon disorder of the stomach, liver, or other organs connected with digestion and assimilation.

Although the kidneys have undoubtedly independent secretory powers, they must in the main be looked upon largely as filters, whose office is to remove from the blood-current the products of metabolism, or effete matter, whose longer retention is injurious to the system; and in the character of the secretion we discover the manner in which the life processes of the body have been carried out. If the blood which comes to the kidneys has not been properly prepared, if antecedent processes of assimilation and disassimilation have not been properly carried out, the secretion from the kidneys cannot be such as belongs to perfect health. And it is here that the relation between the kidney secretion and certain diseases of the skin becomes of interest and importance; for it cannot be denied that a proper condition of the blood is necessary for the proper nourishment of all portions of the body, including the skin.

It is recognized, of course, that there can be very great variations in the quantity and quality of the urine, which are quite within the limits of fair health. It is also recognized that errors in the action of various organs often adjust themselves spontaneously. It is recognized that in many instances the faulty condition of the urine found is only the effort of nature to rid the system of imperfectly elaborated material. But with all this, it is believed that the blood conditions thus shown are of importance as indicating the state of nutrition and of the skin; and clinical experience has shown that certain lesions on the skin do vary more or less, according to the condition of the urine.

The manner in which systemic derangements exhibited by disordered or deficient urine operate in influencing changes in the skin, is not as yet by any means determined. I cannot wholly subscribe to the doctrine of Haig, that they are due to capillary changes excited by the presence of

uric acid circulating in the blood. While many of his clinical observations in regard to the concurrence of certain symptoms in various organs are most excellent, the researches of others seem to point to some doubt in regard to the actual circulation of free uric acid in the blood; but the fact remains that with deranged urine we do frequently have changes in the skin as well as in other organs, which pass away when the urine shows that these systemic derangements have been corrected, whether by medicine, diet, hygiene, or even by the recuperative processes of nature.

Imperfect and deficient urinary secretions can be manifested in many different ways, and all of them should be appreciated and considered in order to rightly estimate the relations which they may bear to diseases of the skin or other organs. Not only is it important that the chemical ingredients of the urine should be in the proportions belonging to health, but it is also essential that the individual should pass them in sufficient quantity; and this is a matter which is often not attended to. In numbers of my patients who stated that they passed sufficient urine, it was found on actual measurement that the quantity was not one-half the normal amount; and continually it was found that the daily excretion of solids was far below the normal standard, occasionally not more than one-half the proper amount was being passed.

In recent papers* I have called attention to this deficient kidney excretion, and have given a table for the calculation of the solids which should be passed in health for different body weights of women, which is as follows:

Relation of body weight of women of average health to total daily secretion of urinary solids:

Weight, pounds.	Total urinary solids, grains.	Weight, pounds.	Total urinary solids, grains.
90	500	135	815
95	535	140	850
100	570	145	885
105	605	150	920
110	640	155	955
115	675	160	990
120	710	165	1,025
125	745	170	1,060
130	780	175	1,095

These figures for women do not represent much active exercise and with increased bodily exertion the solids passed should be materially more; men excrete about one-tenth more than women. There are also less urinary solids passed with advancing age, and about 5 per cent. may be deducted for each ten years after forty.

It is not a very difficult matter to carry out the plan of learning the total daily excretion of urinary solids if it is rightly arranged. I have long had it done daily in many instances, and in others at stated intervals. An ordinary two-quart mineral-water bottle is used, with a strip

*Transactions Medical Society of the State of New York, 1897; *Journal of the American Medical Association*, January 8, 1898; *New York Medical Journal*, November 5 1898.

of paper or adhesive plaster on the side for a scale. This is graduated by filling the bottle from a two-ounce measure and marking off each two ounces; the space for the intervening ounce can be divided by the eye. A glass funnel is kept in the mouth of the bottle, by means of which the urine can be poured into it as passed. The index is read off, the amount recorded, and the bottle emptied at the same fixed hour every day, a sample of the whole being sent to my office, with the statement of the total amount passed in the twenty-four hours.

From the specific gravity of the sample the total amount of solids passed in the day is easily estimated by Haine's modification of Hasser's methods, which is as follows: *Multiply the last two figures of the specific gravity of the urine by the number of ounces voided in twenty-four hours, and add 10 per cent to the product.* Thus, if the amount passed in twenty-four hours was 36 ounces, and the specific gravity 1.021, it would be $36 \times 21 = 756 + 10 \text{ per cent.} = 831$, the number of grains of solids in the whole amount. By comparing this with the table it can readily be ascertained if the amount is above or below the normal standard for the body weight of any patient.

But it is also very important that the *actual quantity* of the urine should be correct; for, even with a proper daily excretion of solids the life-processes are not properly carried out when the quantity is scanty and the specific gravity high; many symptoms of ill-health will often be found to disappear when there is a free flow of urine, of an average normal density. This has been repeatedly observed in many of the cases forming the basis of this study. The specific gravity and acidity of the urine are thus often of the greatest value as indications of the manner in which metabolism is carried out in many patients with diseases of the skin. The same is true with regard to observations as to the urea, indican, etc., and microscopic sediments also often furnish most valuable indications, as all recognize.

Very much could be said in regard to the possible or probable effects resulting from different and special changes in the composition of the urine, which would lead far beyond the proper scope of this paper. We are not yet in a position to indicate the exact relation of them to disease on the skin, and more observations are needed to enable positive deductions to be made. But of this I am positive. By means of them there may often be detected errors in the processes of nutrition, which might otherwise escape recognition, and a little practical experience will often enable one to utilize the knowledge thus gained very effectively in the management of certain diseases of the skin.

The two thousand urinary analyses which form the basis of this study were made upon the excretion from 569 patients, 265 males and 304 females, of all ages. They relate to patients with most varied diseases of the skin, over fifty different affections being represented. In many instances but a single examination was made, of the morning and night specimens, because of some clinical indication or thought of a possible urinary derangement. In many other instances repeated analyses were made, often extending over long periods, during treatment, and the results of remedies observed.

The specific gravity varied from 1.045 to 1.003; and of 1816 analyses 463, or over one-fourth of the whole number, gave a specific gravity of 1.030 or over, while there were large numbers with a recorded specific gravity of 1.026 to 1.030. There were but 51 specimens with a specific gravity of 1.010 or under.

The reaction of the specimens varied greatly. With an oxalic acid equivalent in 100 c.c., a percentage of .3 being about normal, the specimens ranged from the highest, .6804 in a case of eczema, to neutral or even alkaline in rare instances. While high grades of acidity were very common, there were also many specimens far below normal, and many striking contrasts between the morning and evening specimens were observed.

It is surprising that albumen was found so seldom, it occurring in but 62 specimens, relating to 26 patients, in the entire 1816 complete analyses. In a number of instances where the urine was below 1.010 there was no albumen, several of these having a specific gravity of 1.003 and 1.004. Nor was sugar often found, but 36 times, relating to 15 patients; even several specimens at 1.044 and 1.045 contained no sugar.

The alterations in the urine were largely due to variations in the organic salts. Thus oxalate of lime was recorded in 460 specimens, uric acid in 269, and the urates in 240 analyses.

The amorphous phosphates were the most frequent deposit, being recorded 717 times, relating to 271 patients; the triple phosphates were recorded 118 times, relating to 55 patients. Many of these examinations belonged to one syphilitic patient having obstinate cystitis; in some instances they were due to decomposition, but were occasionally found in fresh specimens.

The urea varied in quantity much less than would be expected. Of 531 specimens in which this was accurately determined, the percentage varied from 4 to .4 per cent., the normal being about 2 per cent. In one case of seborrheic eczema the night specimen gave .04 of urea, with a specific gravity of 1.029, and in another case of the same trouble the urea stood at .04 and .032 respectively, with a specific gravity of 1.039 and 1.035; in the former there were amorphous phosphates, and in the latter urates and uric acid, with amorphous phosphates in the morning specimen. In 353 specimens the urea stood at 2 per cent. or over, and in 178 specimens, or one-third of the whole number, it was below the normal amount.

The phosphates and chlorides were both found to vary greatly on quantitative analysis. Thus in but 16 per cent. of the analyses were the phosphates normal or above, and in but 8 per cent. were the chlorides up to the normal standard. The sulphates are the most stable constituent, rarely varying from the 1 per cent. found in normal urine; once they reached 2 and 2½ per cent. in a number of specimens with very high specific gravity from a case of hyperidrosis; they were diminished to one-half the normal amount in several specimens with low specific gravity from patients with acne and eczema.

Coming now to the urinary changes observed in connection with special diseases of the skin, as mentioned before, our analyses relate to

patients with some fifty different diseased conditions; many of these are of no relative importance in the present study, while others present most interesting and valuable data. Those pertaining to some of the more important diseases will be considered.

Eczema, of course, comes first on the list. There were 924 analyses relating to 316 patients with eczema, 183 males, 133 females, almost all of them adults, of various ages. A glance at the tabulated results of the separate analyses exhibits a curious and tangled picture; while some few specimens represented healthy urine in all particulars, there were really very few where gross and radical departure from a normal standard were not observed.

Not only were many found with very high specific gravity, and many very low, but very great discrepancies were observed between the morning and night specimens; the highest specific gravity observed was 1.045, in which the urea was double the normal amount, with abundance of urates and uric acid. The average specific gravity of 883 specimens was 1.023.

The urea and chemical constituents showed the very greatest variations. While the average of 145 analyses gave an exactly normal proportion of urea, it was relatively below the proper proportion to the average of the total solids, which called for an average of .027. There were a number of specimens where it was very high, even up to .041, the normal being .02, but there were also very many specimens where it was below 1 per cent., in one instance even down to .002.

The urinary salts showed very great and strange variations, and no figures can express the conditions found, so irregular were the proportions in various specimens. But an average of 50 analyses showed the chlorides to be markedly diminished, 9.5 per cent. in place of the normal 16 to 18 per cent. The phosphates also were diminished, giving an average percentage of 8.4 in place of the normal 12 per cent., while in these very specimens amorphous phosphates appeared on microscopic examination 28 times. This shows that the finding of phosphates microscopically does not indicate an actual excess in the urine. The sulphates were slightly in excess, 1.12 per cent. (normal 1 per cent.).

The disparity between the total amount of solids in many specimens and the urea and chemical constituents, as shown by analysis, was often very striking, and can only be explained by a large amount of uric acid in solution, which was not tested for.

In looking over the compiled tables of these analyses one is struck with the universality with which crystalline deposits were discovered by the microscope. As already mentioned, the amorphous phosphates were a very frequent sediment, while uric acid, oxalate of lime, and the urates were constantly observed. In almost every one of the 885 analyses one or other, or often several of these microscopic elements were recorded.

Acne is a disease constantly associated with disturbances of assimilation, and our analyses of the urine showed abundant evidence of these errors. There were 503 urinary analyses relating to 93 patients.

The specific gravity varied from 1.044 to 1.004; and the average gravity of all was 1.025. There were very many specimens at 1.030, but sugar was not present in any, the increased weight being due to salts.

The urea varied from .039 to .004, but was more commonly above normal; the average of 108 analyses gave .022.

As in eczema the chlorides and phosphates were below normal; the former gave 8.65 per cent. (16-18 normal), the latter 7.7 per cent. (12 normal). The sulphates were slightly increased, 1.2 per cent. (1 per cent. normal). As in eczema, it is difficult to see the elements contributing to the increased specific gravity. Almost all the specimens exhibited microscopic evidences of derangement, in the way of phosphates, uric acid, oxalate of lime and urates.

Pruritus is accompanied by urine of very different character, as shown by 98 examinations of specimens from 19 patients. The specific gravity varied from 1.036 to 1.008, the average being 1.024. The acidity was considerably above normal, and the urea averaged 2.5 per cent. The amorphous phosphates were found microscopically in almost all the specimens, with uric acid, oxalate of lime and urates in a few. One specimen contained a trace of albumen, and, strange to say, sugar was not recorded in any.

Psoriasis is represented by 67 examinations, relating to 26 patients. The specific gravity varied from 1.040 to 1.011, the average of all the specimens being 1.026. The acidity was high, and oxalate of lime was a very frequent microscopic object, being recorded 28 times, and uric acid and urates 17 times. The urea was a little above normal, averaging 2.4 per cent.

The remainder of the analyses related to too few patients in each disease to admit of any general averages being made, but the individual specimens presented very many interesting features, some of which may be mentioned.

Thus in one case of *alopecia areata*, twenty-six urinary analyses were made, extending over a considerable period of time. The urine was persistently very acid, and of a high gravity, seldom falling below 1.030 and with an average of 1.031: the urea was also very high, yielding an average of almost 3 per cent; there were constantly microscopic deposits of phosphates and oxalates, with occasional uric acid. In several cases of *erythema* the urine was of a high average specific gravity, with almost constant presence of uric acid or amorphous phosphates microscopically. In nine cases of *furunculosis* the average specific gravity was very high, but the acidity was very low: the urea averaged 2.4 per cent. The chloride, phosphates, and sulphates varied greatly in the specimen analyzed. In several cases of *lichen planus* the specific gravity of the urine averaged high, but the acidity was low. In three cases of *urticaria* the same was observed; in one case urates was found microscopically in a neutral urine, and in another amorphous phosphates, with the same reaction.

In reviewing again the data obtained from a study of these tabulated analyses, one is disappointed with the actual results as to positive facts connected with the condition of the urine in the different diseases mentioned; for it must be conceded that no very sharp lines of differentiation can be drawn between them.

But, on the other hand, these results are about what was expected,

for, as stated at the outset, there is no claim made that any particular urinary changes can be yet demonstrated to have any direct and immediate connection with any particular skin lesion. The object of this study is to call more attention to the fact than is usually granted, that in many patients with skin diseases there are errors of nutrition and metabolism which must have something to do with impairment of the integrity of the skin. This evidence of deranged assimilation and disassimilation appears abundantly in the tabulated sheets of analyses, for an inspection of them shows that exceedingly few of the analyses represent the urine of health, in all respects; while many of the individual analyses exhibit evidences of gross departure from healthy urine.

It would undoubtedly have been better if the specimens analysed could always have been samples of the urine of the entire day, and if the total daily excretion was always known the figures given would then have been of relatively more value. But as this is often infeasible in the ordinary run of practice, this study was made from urine as ordinarily tested by the physician, the morning and night specimens.

4 East Thirty-seventh Street, New York.—*Journal of Cutaneous and Genito-Urinary Diseases.*

WHEN SHOULD WE OPERATE IN APPENDICITIS?

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So much has been written on the subject of appendicitis that I have hardly the temerity to proceed and I am sure I would not have if it was not for the memory of many cases that I feel could have been saved and others "in futuro" that never will until some of the general practitioners rise above their prejudices. I believe it is the duty of all operators to agitate this subject until the correct position of operative procedures is thoroughly appreciated. If men who do not operate and meet these cases would have in mind septic ones and their serious termination—if not in death, they go on to abscess, drainage, ventral hernia, and a long convalescence—as well as catarrhal ones with their recoveries, then much will have been accomplished. To diagnose and correctly appreciate the uncertain cases is the most essential feature. Like other surgical conditions that invite procrastination, appendicitis may lead us to a serious or fatal termination. I propose treating only one feature of the disease, and that the old one, namely shall we operate in all cases, or shall we follow an expectant line of treatment? There are many able men in favor of both expedients.

Important Factors.—There are important factors in every case that the general practitioner should consider, viz.: Are the symptoms clear cut and urgent? Is it a primary or recurring case? How far advanced is it? What is the opinion of the patients' friends or advisers? Has some one in the vicinity had a slight catarrhal attack of appendicitis, or other local disease with the character of appendicitis, which has ended in recovery without surgical interference, or has surgical interference in some neglected or fulminative case ended fatally? Either condition will have a material effect on the family and friends in deciding concerning an operation. Then there is the clinical experience of the one in attendance, and the class of cases he has met, the question whether or not he does surgery, whether he is opposed to calling in a consultant, how many cases he has had and their outcome, and, lastly, whether he concludes his consultant is advising an operation purely because he is desirous of performing it.

There is no fair comparison between the eminent specialists of the large centers, whose every utterance is law to so many, who have such a wide territory to draw from that their patients and even their professional brethren do not know of their results, and the practitioners of smaller places. We general practitioners are most excusable—with our limited opportunities—for the feeling of anxiety and apprehension that comes with each case of appendicitis, when we review the great variation in the views of our most eminent men. One will say, "Operate at once," another, "be conservative and follow an expectant line of treatment that you may have the advantage of an elective operation," while still another equally eminent man says that operative procedures are seldom indicated. Errors of judgment will occur with us all, but these conditions must be met and corrected by men of the greatest experience. I am sure that mistakes, if properly interpreted, are powerful for good.

Indicative Symptoms.—What symptoms are of service to us in reaching a conclusion that we should operate in a case of appendicitis? Temperature, pulse, respiration, general or localized pain, vomiting, sudden onset, tenderness in the immediate region of the appendix, the facial expression, the presence of a tumor, rigidity of the abdominal muscles, edema of the abdominal walls, distension of the abdomen, tympanites and chill, are all at one time or another observed in appendicitis. The pulse, temperature, respiration, nausea and vomiting are in no sense a guide in the first stage because different patients react so differently to the first impressions of the toxins. The pain is at first referred to the umbilicus or epigastric region, and then after a few hours settles down in the region of McBurney's point; you can readily appreciate that the exact point varies according to the location of the appendix. Later, we may have a severe paroxysm of pain, which so many characterize as the time at which the rupture occurs; it is of value in that it indicates the time at which the alarming symptoms commenced.

The presence or absence of pus in an inguinal tumor is a condition which must be considered very carefully in estimating the value of the symptoms; as an acute general peritonitis may appear in a case of appendicitis in which the general cavity is not protected, or a perforated appendix may be walled in by lymph which is barely sufficient to close the opening or surround the slough. It is of interest to note that the abdominal muscles protect an inflamed appendix by their rigidity, and that they do so regularly, and that they do not protect in the same way an inflamed ovary or tube, only an inch or two distant, but remain normally relaxed.

The rigidity of the abdominal muscles is an important symptom, and when associated with the anxious facial expression and rapid pulse, I always feel that there is trouble ahead. In late cases increased edema of the abdominal walls, with distension of the abdomen and progressive inflammation, marked at first by a rise in temperature, which is shortly followed by a fall, with a weaker and quicker pulse, is characteristic of a diffuse septic peritonitis; this condition, preceded by a severe paroxysm of pain in that region, indicates a ruptured appendix, which may be diffused or walled off. A chill sometimes occurs at the onset, again at the stage of perforation, and later if sepsis supervenes.

Remarks.—During the past year I have been called in consultation in nine cases of septic appendicitis which succumbed to the disease, and which, I believe, could have been saved if those in attendance had acted along the lines of our present conclusions in these cases. I have also operated on at least a dozen cases of fulminant appendicitis, during the same period, sent to me by another class of observers, without a death, and in five of this number rupture had occurred, though it was not thirty-six hours from the initial symptoms. How can we avoid the fatality of the first variety? Only by the attending physician associating with himself, when in doubt, some one thoroughly familiar with these cases, and so being in a position to differentiate the catarrhal from the septic cases, and thus reaching those requiring operative procedure early.—*Journal A. M. A.*

TAKING COLD.

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Taking cold is nothing but a *vulgarity*.

It is from this cause primarily that most bronchial affections arise.

Habitual colds are due to an ill-kept skin on the outside and depraved mucous membranes on the inside, coupled with carelessness.

For one whose digestion is right and whose skin is bright, who takes common sense precautions when exposed to unfavorable conditions, colds have little use.

Grooming, hardening, common sense, proper food and pride of person are the foundations upon which a cold cure must rest.

The man who occupies the bath room every morning for three-quarters of an hour to the detriment of everybody else, who can be heard sporting and splashing in the shallow water, is usually the healthiest one among the *boarders*.

A cold sponge one to three minutes long, with a brisk rub immediately before and after it, is all that is necessary to keep the cutaneous circulation alive and the skin re-active to sudden changes of temperature. Never bathe when cold; rub warm first.

If the cold sponge or shower cannot be taken in the morning for some *mighty* reason, although the whole procedure should occupy less than eight minutes' time, it may be had at night before retiring.

For those unaccustomed to cold water, tolerance can be gained in three weeks' time, by the use of water at any comfortable temperature, making it one degree colder each day, until it can be employed without dread, as cold as it will run.

For cold feet, wading ankle deep before retiring, in water in the bath tub, for one or two minutes, or until the feet begin to pain, should be practised.

Rub hard afterwards.

If reaction does not set in, wrap the feet in blankets and let them alone; they will soon thaw out.

Do not use water bottles or other debilitating heat.

A month or two of this sort of hardening will effect a cure.

Cold hands may be treated in the same way—cold clammy hands.

Salt may be added to the water for its stimulating effect, or alcohol; witch hazel is also useful.

Tuberculosis is no contra-indication to the use of cold water. The more delicate the person, the greater the care required, but the more brilliant the results.

Cold water intelligently used, does not steal vitality, but fosters it. It stimulates the nerves that control the calibre of the blood vessels and regulates the cutaneous circulation. It is a respiratory stimulant.

Hot water should be employed once or twice a week when a full bath is taken and soap used. The duration of the bath should not exceed ten minutes, except for the obese, and end with a cold sponge.

If catching cold results from dust or disease in the nasal passages, they may be washed out regularly with some tepid alkaline solution and with as much satisfaction as one brushes the teeth. This procedure is properly a part of the morning toilet for those at least who suffer from catarrh in the atmosphere of great cities.

Operative interference on the nose and throat may be required for deflections, deformities, or diseased tissues acting as an exciting cause.

The inside and outside skins of the body are so much in sympathy, so dependent upon each other, that disorder of the one is sure to react upon the other; and this is as true of the bronchial mucous membrane, as it is of the alimentary canal and the cuticle.

Over-eating when tired, over-eating in connection with over-exertion, over-eating anyway, indulging in things known to disagree, that cause headache in this case or palpitation in that, biliousness, or insomnia, that precipitate an attack of asthma, hives or piles, or aggravate an existing cough or skin disease, are among the *habit* causes of colds; for taking cold is nothing but an attack from without, that succeeds, made upon the outside skin when not properly supported from within or from lack of tone, its own, or carelessness on the part of the man who wears it.

A healthy digestion and a healthy skin acting and reacting in harmony, coupled with purpose enough on the part of the owner, to discover the cause that ushers in the unwelcome visitor or with common sense enough to "keep moving when rained on," reduces the liability of having this guest to entertain regularly to a shadow knocking at the door. One should never stand on a street corner in winter if chilly or cold, but keep moving and *breathing*. Work the lungs as bellows till the perspiration (fire) starts.

The person who keeps moving when wet and moving and breathing *deep* when chilly, will seldom have a chance to complain about taking cold from getting soaked through, while standing on a street corner at night waiting for a car.

It is by care in eating and drinking, by controlling bad habits and cultivating a healthy skin, we are enabled to banish colds and regulate the circulation through the lungs and bronchial tubes.—*The Dietetic and Hygienic Gazette*.

THE PRESENT STATUS OF THE TREATMENT OF PUERPERAL INFECTION.

BY DR. H. J. GARRIGUES.

(*St. Louis Courier of Medicine*, Jan., 1901.)

The author reminds the profession that 17 years ago he introduced strict antiseptic obstetrics in America when he urged disinfection with corrosive sublimate and the "occlusion dressing." From 1875 to 1883 the mortality average was 4.17 per cent. at times reaching as high as 8 or even 20 per cent. During the first three months after changing the treatment there were 102 confinements without a single death. During the first ten years of the new era the mortality from sepsis dropped to 0.39 per cent.

While opposed to the frequent use of intra-uterine injections—and particularly of corrosive sublimate—the author favors vaginal injections with creolin or lysol. In the "diphtheritic" wounds of vulva, vagina, or cervix, he believes in exposing the parts in the vaginal speculum and cauterizing the patches with 50 per cent. chlorid of zinc solution. Excepting in peritonitis he believes in aperients and enemas, particularly in the beginning of puerperal infection. Local cold or hot applications are recommended indifferently for the relief of pain. Iodoform suppositories are daily introduced if the interior of the uterus is effected. Ergot and faridization are used by the author if the uterus is not properly contracted. He is opposed to antistreptococcus-serum injections and also to Credé's ointment. He leans favorably toward the internal administration of nuclein and to the intravenous injection of normal salt solution. Of 13 cases of diffuse peritonitis treated by the opium plan seven got well.

Curettage by means of the finger nail the author strongly commends, as well as the exceptional use of the dull curette, in cases in which placental tissue is left in utero. For simple endometritis the scraping operation, on the other hand, is totally wrong. Inguinal incision and posterior colpotomy are indicated in local abscesses. Laparotomy in diffuse peritonitis may be indicated but gives no better results than when the cases are left alone. Tubal and ovarian abscesses should be attacked from below—exceptionally from above. Two cases in which hysterectomy was attempted or performed died.

"Looking back over the whole field and weighing the evidence adduced by different observers," the author concludes, "that surgical interference, inclusive of intra-uterine douches and curetting, has done more harm than good."—*The Post Graduate*.

SOME POINTS OF PRACTICAL IMPORTANCE IN THE SYMPTOMS AND TREATMENT OF ACUTE PNEUMONIA.*

BY ROBERT H. BABCOCK M. D., CHICAGO.

There are two conceptions of the nature of acute pneumonia: One, that it is a local inflammatory process of microbic origin with secondary systemic disturbance resulting from the absorption of toxins; the other that it is primarily an acute infection having peculiarly marked tendency to fibrinous exudation within the lungs, either alone or in conjunction with the same sort of exudate in the serous cavities, so that the pneumonia is but one of the local manifestations of the disease. To my mind this latter view corresponds with the morbid anatomical changes found post mortem, and explains the clinical phenomena observed during life.

The points which I desire to bring out in this paper are, first, that a pneumococcus pneumonia is not necessarily a lobar pneumonia; and secondly, that the gravity of the symptoms in many cases does not depend upon or bear any relation to the extent of the pneumonic process, but is the result of the infection.

The correctness of the first proposition is seen in those cases, usually called atypical, in which instead of the whole of one or more lobes becoming hepatized, signs of consolidation are discovered over a very limited area, perhaps at one base or over all patches in several situations. These are lobular pneumonia, not lobar, and if severe bronchitis is associated, they are likely to be regarded as bronchopneumonias.

The truth of the second proposition is seen in those cases in which with little or no discoverable evidence of pneumonia the patient nevertheless dies, in spite of the most approved treatment, from heart weakness accompanied by cyanosis.

The following case illustrates these two points admirably: A gentleman of 73, who had been ailing more or less for ten days with what appeared to be a simple acute bronchitis, was taken suddenly worse on Saturday afternoon with what seemed to be an asthmatic seizure. When his physician arrived the patient was still breathing with difficulty, but exhibited no signs of pneumonia. During that same evening the lungs filled with râles very much like those of mild pulmonary edema, and there was frequent cough, with scanty mucous sputum. Temperature was subnormal— $96\frac{1}{2}^{\circ}$ in axilla; respirations were labored rather than accelerated. Codeine relieved the cough somewhat, and the next day his physician was unable to detect anything more than some roughness of the breath sounds in the left lung. Monday forenoon the patient developed a fever of 103° , with respirations of about 26, and moderate acceleration of the pulse. In the afternoon of that day his temperature in the axilla sank to normal, and when I saw him in consultation at 8.15 in the

*Read before the Tri-State Medical Society, Keokuk, April 2, 1901.

evening it was but 97.6° , respirations 28, and pulse 78 but occasionally intermittent; this last feature having developed at six o'clock. The patient lay partly turned to the right side, breathed without much difficulty, and was in a condition of somnolence, from which however he could be easily aroused, and was then entirely conscious. The heart was greatly enlarged and the sounds, particularly the pulmonic second, were feeble, and there was moderate cyanosis. The abdomen was moderately tympanitic. Over the front of both lungs they were resonance and roughened vesicular breathing, except directly below the outer third of the left clavicle, where there was dullness, and the respiratory murmur was bronchial without râles. Posteriorly there was a small area of dullness and bronchial breathing in the right infrascapular region, and on the left side breath sounds were rough, but I could not make out any dullness. As already stated, the temperature in the axilla at this time was a trifle below 98° . But suspecting this to be delusive, I asked that the rectal temperature be taken, which was done, and the internal heat was found to be 102.1° . This settled the cause, and I expressed the opinion that this was a pneumonia with scattered and small exudates, and that the patient was suffering from paralysis of the vasomotor centres in the cord with consequent capillary paresis and cardiac asthenia. The prognosis was declared most grave—in fact, it was predicted that recovery would not occur. In spite of vigorous and approved treatment the patient failed steadily, and died the following afternoon.

The instructive features of this case are three: first, the patchy distribution of the pneumonic exudate; secondly, the intensity of the infection, which led to death in less than three days from its invasion; and thirdly, the apparently subnormal temperature. Regarding the first I may say there can be no doubt of the nature of the disease notwithstanding the fact that it did not present the ordinary character of lobar pneumonia. It was not a catarrhal inflammation of the lungs attendant upon bronchitis, but was a clear manifestation, as respects the pulmonary condition, of senile pneumonia of pneumococcus origin.

An entire lobe may be involved in the aged the same as in a young adult, but not uncommonly the involvement is lobular, and in the matter of diagnosis it is important to remember this fact. The second point concerns the display of infection. Romberg and Passler have demonstrated by experiments on lower animals that when cyanosis appears in the course of acute pneumonia it is due to paralysis of the vasomotor centres in the spinal cord, and that the heart weakness is secondary to this vasomotor paresis. This enables us to understand why in this case death occurred although other evidences of intense toxemia were wanting.

The third element of interest was the seemingly subnormal temperature. It will be recalled that this low temperature of 97.6° was obtained in the axilla. This is not difficult to understand. In consequence of the capillary dilatation that produced the cyanosis, radiation of heat was so rapid that the skin became disproportionately cool and the thermometer failed to reveal the actual state of the body temperature. Therefore, whenever in a case of pneumonia with cyanosis the patient seems fever-free, the temperature within the rectum should be ascertained.

This is the second time during the past winter I have seen such a state of things, and both times, as it happened, the pneumonia was in an old person. I can now recall another observation of the kind in a comparatively young woman, so that the phenomenon has no connection with the age of the individual, but is merely due to the state of the capillaries, and primarily therefore to the action of the toxins on the vasomotor centres.

The practical point I desire to make in the treatment of acute pneumonia grows out of the effect of infection on these nerve centres. We have long been wont to administer nitroglycerin so soon as cyanosis appears. Elsner in an admirable paper before the American Climatological Association two years ago reported his success in these cases with the frequent administration of diffusible stimulants. He advocated the use of fifteen drops each, every twenty minutes, of aromatic spirits of ammonia, compound spirits of ether, compound spirits of lavender, and tincture of valerian, keeping them up day and night so long as danger exists. Although in the discussion of his paper I maintained that nitroglycerin does sometimes act as a heart stimulant if not given in too large doses, still I have come to the opinion that as this agent is in itself a vasodilator and is likely to intensify the capillary paresis, it is better to rely upon diffusible stimulants. It should be remembered that their action is very evanescent, and therefore they should be administered from two to three times an hour. Their purpose is to stimulate the failing heart and enable it to overcome the influence of capillary stasis. Alcoholic preparations, as champagne and high wines, are also useful in small, frequently repeated amounts. I apprehend that when digitalis does good in these cases, it is because in addition to reenforcing cardiac systoles it contracts the arterioles and antagonizes the stagnation in the capillaries.

Aside from pure heart stimulants in these cases I know of nothing so efficient as full hypodermic doses of strychnine as a cardiac tonic, one-thirtieth or even one-twentieth every two hours, and in very urgent cases even hourly. Caffeine, by preference the valerianate of caffeine, in grain doses, is also thrown under the skin every two hours or oftener. This remedy not only acts as a cardiac tonic in conjunction with the strychnine, but also exerts a vasoconstrictor effect. I have seen surprising results follow this treatment, the pulse increasing appreciably in strength and the pulmonic second sound becoming louder. This mode of treatment is symptomatic.

We should make attempts to eliminate the toxins, since as yet we possess no certain means of antagonizing them, the favorable reports from antipneumococcus serum to the contrary notwithstanding. I therefore recommend the administration both by rectum and under the skin of a physiologic salt solution. A special apparatus is not necessary, since an excellent gravity apparatus can be constructed out of an aspirating needle and an ordinary fountain syringe. From one to two pints may be allowed to flow slowly into the subcutaneous cellular tissue, and a convenient site for administration is the loose skin of the axilla or the lateral lumbar region. In those cases in which this treatment does good, the pulse grows fuller, stronger, and somewhat slower, while in the course

of an hour there is an increase in the volume of the urine. This treatment may be repeated as often as required. A friend of mine who has frequently employed this subcutaneous infusion of salt solution has assured me that he is confident he has seen it save life in these cases. I regret to say that when I have employed it the condition has been so grave that all means of treatment have proved unavailing. Nevertheless, I believe it should be tried in all cases of severe pneumococcus infection.

The last method of treatment of which I desire to speak is venesection. Although bloodletting is particularly useful in the beginning of sthenic pneumonia in vigorous adults, still it is undoubtedly of service at times in these cases of cyanosis. From sixteen to twenty ounces of blood should be taken from the arm, or the blood should be allowed to flow so long as it remains thick and dark. When the blood becomes red, sufficient has been drawn, even though it does not reach the amount stated. This procedure will sometimes promote the action of the salt infusion. Even when it does not help, it will do no harm, and is not objectionable so far as I can see. At all events such is the gravity of these cases that we should resort to any and all means of treatment that may offer the patient a chance of recovery.

Finally, the inhalation of oxygen is also to be recommended, although it has always seemed to me that its special indication is the mechanical interference with hematosis by extensive bronchitis and such an extent of pneumonic consolidation that life is endangered through the want of sufficient respiratory capacity. When employed the gas should be given freely, and, if need be, continuously.—*Medicine.*

TREATMENT OF ACUTE INFLAMMATION OF THE MIDDLE EAR.

By S. S. BISHOP, M. D., CHICAGO.

In the first stage, or before the serous effusion has taken place or the pain has become severe, gentle inflation and filling the ear with warmed pure or carbolated vaselin will suffice to give relief. When the pain has become intense, inflation must be practiced under very low pressure, as the movements of the drum head, like those of an inflamed joint are exquisitely painful. The patient in this stage should be put to bed to keep the temperature equable; a warm 8 per cent. solution of cocaine or eucaine may be instilled into the ear, and if deemed necessary, $\frac{1}{8}$ grain of morphia can be given in combination with $\frac{1}{16}$ grains of atropia for an adult. If for any reason the morphia and atropia should not be prescribed, bromidia may be substituted in teaspoonful doses, in water, every half hour until relief is obtained. Then it must be discontinued. The bowels and general health should receive proper attention. We have often found that leeches gave speedy relief. Two Spanish leeches may be applied in front of the tragus and two behind the auricle for adults. The external canal is stoppered with cotton so that the leeches cannot enter it. The skin is pricked until a drop of blood appears: then the leech in a two-drachm vial, with its mouth at the opening of the bottle, is placed so that its mouth covers the drop of blood. The vial is held in position until the leech takes secure hold. Then the bottle is removed and the leech is allowed to fill and drop off. This manner of applying leeches is given because few seem to be conversant with the subject, and this method removes the common objection to handling such repulsive creatures.

Especial care should be exercised to abstract the blood in middle-ear inflammation as much as possible from the region of the tragus, on account of the intimate relation of the blood vessels of this region and the anterior wall of the meatus with the vessels of the tympanic cavity. If enough blood has not been abstracted after the leeches fill and fall off, more can be drawn by applying napkins wrung out of warm water. If there should be any difficulty in stopping the bleeding from the leech-bites, pressure applied to them will succeed. The artificial leech is also an excellent device, but it occasions more discomfort.

The common practice indulged in by the laity of pouring oils, onion-juice, etc., into the ear is a vicious one, since these become rancid and irritating, and predispose to a subsequent inflammation. Poultices are also mischievous and favor suppuration and perforation of the drum membrane.

The writer has seen the following simple device, always convenient, give grateful relief: A piece of clean cotton is placed lightly in the mouth of the auditory canal. A pipe is partly filled with tobacco and lighted. Then a piece of thin cloth is placed over the mouth of the pipe-bowl and

blown gently through, while the lip-piece of the pipe-stem rests against the cotton pledget. This filters the warm smoke through the cotton into the canal of the ear, and a grateful sedative effect is soon obtained. I do not remember to have seen this remedy mentioned, but its efficacy in the absence of other remedies has been demonstrated.

Fever calls for antipyrin or its equivalent in some febrifuge that is less of a cardiac depressant. Phenacetin and acetanilid act well. Quinine, the enemy of the ear, must not be used. It aggravates the existing hyperemia and conduces to a permanent deafness. Alcoholic beverages and smoking are prohibited, and any inflammatory condition of the respiratory tract must be vigorously combated.

If the pain and bulging of the drum head continue, notwithstanding all efforts to counteract the disease, and rupture of the membrana tympani is threatened, it should be incised with the paracentesis knife, in the posterior-inferior quadrant, so as to afford the most perfect drainage. A warm 8 per cent. solution of cocaine or eucaine should be left in the ear for twenty minutes before the paracentesis, and, if the pain does not soon cease after perforating, more cocaine should be instilled, as hot as can be comfortably borne, so as to percolate through the perforation and reach the mucous membrane within. This will give relief. The incision should be a long one, cutting through the entire area of the postero-inferior quadrant vertically. The longer it is, the more it relieves the tension of the nerves of the membrane and the freer the drainage. The paracentesis knife must be absolutely sharp and should be dipped in alcohol before using. The perforation generally heals in a few days if no pus has formed.

After the pain is relieved, which should be the object of our first efforts, the ear may be inflated with as low pressure as will accomplish it. The air pressure in the tympanic cavity promotes absorption of any fluid contents and will be likely to improve the hearing. This treatment had best be administered for a few days once a day. As improvement progresses the treatments can be given at greater intervals until the normal condition is established.

Diet, exercise and clothing should be regulated on general hygienic principles.—*The Laryngoscope*.

SPECIFIC THERAPEUTICS.

Rumex crispus is a remedy for ulcerative conditions of the mouth either in infants or adults, which depends upon a blood dyscrasia, usually present where the membranes are very red, and where there is general, sluggishness of the system.

Bladder wrack has served us a very excellent purpose in dropsy where the condition depends upon heart faults, with simple or exophthalmic goitre; especially if the patient has reached middle life. In older patients suffering from excess of fat, especially those of lymphatic temperament with tendency to fatty degeneration of the heart, this agent is specific.

Ammonium chloride is a specific remedy for neuralgias of a congestive or a distinctly malarial type. This influence has been observed by many writers. While some authors give it in small doses—form three to eight grains in conjunction with belladonna, and get excellent results—others claim equally good results from this remedy alone if given in doses of from ten to thirty grains.

Ginger is a remedy commonly overlooked when a stimulant is needed. It is more popular in domestic practice than with the profession. Its stimulating influence is immediate and greater even than alcohol. It has pain-relieving properties which are difficult to explain. Whenever there is sudden reduction of the temperature with coldness of the skin or extremities or chilliness, all accompanying some severe local pain, this agent is specific.

Belladonna or atropine has a peculiar effect in drying up secretion. They may be given for this effect in any case where there is great excess of secretion, such as the pouring out of an acid fluid from the stomach in great excess, or large watery diarrhoeas of excessive bronchial or nasal discharges as is well known in night sweats. These, however, are only side influences, although very important, depending upon the physiological influences of the drug.

The indications for nitric acid are exceedingly plain, and sometimes a long train of symptoms will disappear when this agent is given according to its symptomatology. The tongue and mucous membranes are of a violet color, sometimes carmine or clear red. The membrane is apparently transparent, though its color is plainly seen. The membranes are dry from the deficiency of the secretion. There is general inactivity of the intestinal glands and unusual lack of tone with a tendency to diarrhoea.

We have frequently given the symptomatology of turpentine, we give it again because it is generally overlooked and exceedingly important in some very common disorders. First, in excessive secretion of mucous, catarrhal discharges from whatever cause especially if there be relaxed, enfeebled, atonic mucous membranes. It may be given with perfect confidence in all cases with these phenomena. Second, in gastric or intestinal inflammations, or in persistent fevers with dry, red, glazed

tongue, dry mucous membranes, tympanites, with suppression of the secretions of all the gastric and intestinal glands.

It is also indicated by a steady distress or dull grinding pain in the abdomen, a sensation of hardness across the abdomen, with tendency to constipation, with general inactivity of the entire glandular structure of the gastro-intestinal tract.

The specific indications for *craetagus oxyacantha* have not yet been very clearly determined. They would seem to be heart feebleness, with considerable functional disorder showing itself by angina, dyspnoea, palpitation with great weakness, intermittent pulse with deficiency of arterial tonus, especially if dropsy be present. These symptoms do not cover its entire field of action, as they are present usually in the heart disease of advanced life; while we have cured irregular heart action and pain in the heart with dyspnoea in hysterical young ladies, with this agent.

The external application of mustard is demanded where there is severe acute local pain, usually with coldness of the surface above it. It should be applied in these cases to obtain its immediate full physiological effect. It should induce redness with an intense burning sensation from four to eight minutes after its application, when it should be removed. Mustard mixed with flour and applied for a slow effect has no influence on acute pain. It has some beneficial effect on old standing inflammations. Soreness with dull and steady pain, slowly developing and persistent, is not greatly benefitted by the application of mustard.

The tingling sensation that occurs in the limbs after sleeping, more or less habitual with some parties, may be relieved by three grain doses of the iodide of ammonium given three or four times a day,—*Chicago Medical Times*.

AN EXCEEDINGLY RARE CASE OF IMPERFORATE ANUS.*

Chas. B. Kelsey, New York, reports the case as follows: The patient, a man of twenty-four, fairly well nourished, though weighing only one hundred and seven pounds at time of operation, was born with an imperforate anus. The history beyond this is exceedingly meagre from the fact that both his parents died in his childhood; but he knows that the opening was made in the perineum during the first few days of life, and that there has always been a free communication between the bladder and the rectum by which urine escaped per rectum and feces per urethram. He states that he has frequently gone for three months without any fecal evacuation of any sort; and that after such a period it is not unusual for him to fill two chamber utensils full of solid matter. On examination there is found a deep anal depression ending in a narrow, firm undilatable slit running antero-posteriorly, which admits the index finger with pain. The slit is surrounded by and located in fibrous tissue. Through this slit the finger impings upon an immense fecal impaction extending above the umbilicus and filling the entire lower abdomen, and

* St. Louis Med. Review.

the mass is so stony that hardly any impression can be made upon it. There is no sphincteric power (no sphincter) and the usual fluid discharge existing with impaction is caught in a large sponge which the patient had been always in the habit of wearing against the anus. Under ether it required the united efforts of two men and two nurses forty-five minutes to break up and wash out the fecal mass. A sound passed into the urethra revealed an entire absence of corpus spongiosum for about an inch and a half in front of the triangular ligament, its place being taken by a thin membrane which separated the urethra from the rectum. This membrane was absent at one point for a space about one-third of an inch in diameter, through which communication with the rectum existed. The usual incision for colostomy was made on the left side. An immense pouch was found in the site of the descending colon, with thick, muscular walls and large vessels. An artificial anus was established where it narrowed into the transverse colon.—*Medical Press.*

FOR BETTER RELATIONSHIP.

Anent the movement inaugurated by the Toronto Drug Section of the R. M. A. to bring about a better understanding between physicians and pharmacists, we clip from *The Bulletin* the following set of rules which have been adopted by a joint committee of Maryland Pharmaceutical Association and the Medical and Chirurgical Faculty of Maryland, and recommended for adoption by the two associations, accompanied by the expressed belief that "a faithful adherence to them will conduce to the advancement and best interests of the two professions, and will give the public better service and secure for it more satisfactory results." The rules are as follows:

First.—Pharmacists should positively refuse to prescribe for customers except in cases of urgent emergency.

Physicians should carry with them or supply to patients emergency remedies only, except in remote rural districts, where the sending of prescriptions to be filled is impracticable.

Second.—The substitution of one article for another or one make of article for another in a physician's prescription, without the physician's consent, is condemned as a most reprehensible practice.

Third.—It is as unreasonable for physicians to fix the prices to be charged by pharmacists as it is for the latter to determine the charges to be made by physicians for their services.

Fourth.—Whenever a physician, for any reason, objects to the re-filling or copying of his prescription, he should plainly indicate his wishes on the prescription itself.

Pharmacists should refuse to refill prescriptions or give copies of them, when so instructed by the prescriber.

Fifth.—Copies should not be placed upon containers unless ordered to be placed thereon by the prescriber, even though the patient should request it. Nor should any word or label, like "For External Use," "Poison," "Caution," etc., be used unless specifically ordered by the writer of the prescription.

Physicians prescribing poisonous substances should add such directions as will indicate the use for which they are intended, and, if necessary to protect patients, should authorize the use of such labels as they may deem necessary. When unusual doses are prescribed, pains should be taken to indicate to the pharmacist that the quantity prescribed is understood.

Sixth.—In case of a suspected error or substitution by pharmacists in the compounding of prescriptions physicians should always satisfy themselves by conferring with the pharmacist as to the true state of affairs, and in no case should the pharmacist be condemned by the physician either to the patient and family or in the press, without previous careful investigation.

Whenever there is a doubt in the mind of the pharmacist as to the correctness of the physician's prescription or directions, he should invariably confer with the physician, in order to avoid possible mistakes or unpleasantness and should not attempt to make any changes without such conference.

Seventh.—Pharmacists should never discuss physicians' prescriptions with customers, nor disclose the composition thereof to them.—*Can. Phar. Jour.*

TO PROMOTE LARGE FAMILIES

An eccentric millionaire, whose amiable fad would have met with the cordial approval of Frederick the Great, has recently died and bequeathed to the municipality of Rouen an annual sum of 100,000 francs, for the purpose of providing a dowry to a couple of giants, male and female, who are willing to marry in order to aid in the physical regeneration of the human race. The candidates will be required to undergo a medical examination before being adjudicated the prize. Unfortunately, France requires large families in point of numbers rather than in physical size; but from established statistics we doubt whether either end will be gained by the project of this deceased would-be benefactor. Giant growth is what may be described in Yankee terms as "freak growth." Most giants have been the off-spring of moderate sized parents, whilst children that have been borne of giants, that is to say, both parents being giants have generally been puny. We do not know what success Frederick the Great had when he endeavored to breed giant grenadiers, but we believe it did not realise his expectations:—*Med. Times & Hosp. Gaz.*

EXTERMINATION OF RATS

Dr. Collingridge, the Medical Officer of Health for the Port of London, in his half-yearly report states that he has arranged for a supply of a culture from Dr. Danysz, of the Pasteur Institute, Paris, which is pathogenic to rats, but harmless for man. The organism was isolated from the bodies of field mice suffering from an infectious disease, and carried a fatal epidemic among two hundred rats experimentally inoculated with

it. As these animals are known to be disseminators of the *B. pestis* their extermination is a preventive measure of great value. It will be necessary also to guard against the invasion of infection by other channels such as infected clothing, or unsuspected cases of plague:—*Med. Times Hosp. Gazette*.

A NEW LIGHT ON PERNICIOUS ANEMIA.

The Medical Press is very enthusiastic over what it considers a great discovery made by Dr. W. Hunter. This is that pernicious anemia is a septic affection, the poison being derived from the suppuration about the teeth or in the mouth and its dependencies. The poison passes into the stomach where it sets up a special form of gastritis, finally resulting in peripheral neuritis and blood disturbances.

This calls for better habits of oral hygiene and antiseptic mouth washes:—*Dict and Hyg. Gaz.*

THE NECESSITY OF DRINKING SUFFICIENT WATER.

Dr. W. T. Moffet, (*Illinois Medical Journal*, February; *Woman's Medical Journal*, March), quoting Fowler, who says that the kidneys act as regulators of the water supply of the blood, taking from it any excess, and when there is an insufficiency, demanding only enough to dissolve the solid constituents of the urine and to facilitate their discharge from the body, asserts that it is too often a fact that this regulating functions of the kidneys is rendered void by the continued failure to imbibe sufficient water to satisfy the needs of the tissues and fluids of the body. He thinks that many cases of renal inadequacy and self-intoxication, with all the symptoms which may depend upon these conditions, are largely due to a deficient use of pure cold water. With the free use of water elimination will often take care of itself. Drinking cold water increases arterial tension, reduces bodily temperature, increases peristalsis and biliary secretion, and aids digestion. There is a large class of chronic troubles that are associated with constipation, renal insufficiency, and inactive skin. On inquiry it will be found that a large percentage of these cases drink water sparingly, many not at all. All the tissues suffer, toxins accumulate and the whole organism is poisoned—the patient has self-intoxication. Dr. Moffet has known obstinate cases of constipation and eczema to be cured by the free use of water. Most of these patients appear to entertain a distaste for water.—*New York Medical Journal*.

ON THE STERILIZATION OF MILK ; ITS ADVANTAGES AND LIMITATIONS.

A. D. Blackader (*New York Med. Jour.*, Feb. 2, 1901) says that it must be admitted that commercial cow's milk is never absolutely sterile, though varying greatly as to the number and character of the micro-organisms. If obtained under good hygienic conditions, filtered, aerated,

rapidly cooled, and then kept, without much agitation, at a temperature below 10°C ., it will contain comparatively few bacteria. Milk obtained and kept under contrary conditions will not only contain bacteria, but spores and toxins as well, and these cannot be destroyed without, in some measure, destroying the quality of the milk as a food. Russell's experiments show that pasteurization at 70°C . destroys all pathologic and putrefactive germs, as well as the lactic acid producing bacteria; and if this pasteurized milk be placed on ice or kept at a temperature only slightly above 0°C ., it will remain sweet and free from bacteria for many days. If, however, the milk is not kept very cool, other fermentations may occur, producing changes in the milk, in some cases recognized with difficulty, but liable to produce grave disturbances in the intestinal tract. The same can be said of milk sterilized at a temperature of 100°C .

Russell, finding that milk sterilized at 70°C . acquired a scalded taste, and underwent some chemical change, tried pasteurization for fifteen minutes at 60°C . (140°F .). This destroyed from 98 to 99 per cent. of the bacteria; the pathogenic germs of diphtheria and typhoid are killed, but there is a doubt as to whether the destruction of the tubercle bacillus is insured by this temperature, although Theobald Smith, after many carefully conducted experiments, found that tubercle bacilli, of bovine origin, were invariably killed by pasteurization for twenty minutes at 60°C . Milk raised to a temperature of 100°C . is markedly altered in taste and smell. The lactalbumin and globulin are, to some extent, coagulated; lecithin, nuclein and caseinogen are altered; the lactose is partially changed and the organic phosphorus is converted into an inorganic phosphate. These changes interfere with the digestibility of the milk. Wroblewski shows that certain of the calcium salts, necessary for the coagulation of the milk in the stomach, which in raw milk are in a soluble state, are made to enter into insoluble combinations by a high temperature. Other experiments show that it is probable that unheated milk contains ferment-like bodies which, when absorbed, are of distinct value to the economy. The investigations of Russell and Babcock prove that milk obtained in a condition of perfect sterility undergoes a self-digestion owing to the presence of a trypsin readily destroyed by heat. Other observations point to the fact that immunity to disease may be conveyed through the mother's milk, and that such immunity conferring substances are destroyed by a heat of 60°C . or over, thus rendering children fed exclusively on milk sterilized at a high temperature more liable to certain infections leading to disturbances in general nutrition. Alteration in the normal emulsion in the milk also takes place from heat, lessening its digestibility. Where fresh milk drawn with careful precautions can be obtained for infant feeding it is better used raw, but where there is any uncertainty as to the milk supply it is probably the lesser of two evils to have the milk sterilized at the lowest efficient temperature, namely, 60°C ., for about fifteen minutes.

MISCELLANEOUS. SURGICAL HINTS.

Never give purgatives to children who have swallowed foreign bodies, for the reason that it is better that these should travel in company with fecal masses than by themselves.

Small boys brought to the surgeon with a very swollen penis nearly always have buried deep in a sulcus, and often invisible excepting by strict search, a ligature of some sort, or a ring which must be removed.

In bad cases of burns or other severe and painful injuries it is advantageous to give chloroform for the first dressing, or at least to give a hypodermic injection of morphia. This diminishes the pain and fear, and consequently lessens the shock.

The parents of the children with hypertrophied tonsils often object to operation because they think the latter may interfere with the child's voice. This fear is groundless. Explain to the parents that the voice will suffer more from the child's continued bad health than from anything else.

In children with prolapse of the rectum it will often be enough to prescribe the daily use of laxatives, to see that the bowels are only moved while the patient is lying down over a bed-pan, and to strap the buttocks tightly together during the intervals between defecations with a wide strip of adhesive plaster.

In removing the contents of the axilla, begin above the location of the vein, and dissect carefully down toward it. Once found, it makes everything easier. If the vein is imbedded in malignant deposit, apply chronicized gut ligatures at a sufficient distance, and remove vein and all. This is better for the patient than leaving behind any cancerous tissue.

It is seldom wise to consent to the parents being present when an operation has to be performed on a child. Children are bound to be terrified when first given an anesthetic, and their cries for help and appeals to their parents are often more than the latter can stand. More than one surgeon has been compelled to defer or even abandon an operation for this reason.—*International Journal of Surgery*.

APPENDICITIS.—It is not prudent to subject a recent scar to harmful tension at a premature time. So we make it a standing rule, to which there are no exceptions, to keep our patients in the recumbent position for at least four weeks.—**SENN**.

SPINAL ANÆSTHESIA has been seen by Kammerer to come on as late as forty minutes after application of the cocaine solution and yet be very complete. He usually employs about ten drops of a two-per-cent. solution.

LIME BURN OF THE EYE.—Cane sugar in concentrated solution forms an insoluble compound with lime, so it may be used after mechanical removal of larger particles. Cleanse every part of conjunctiva with oil, dilute vinegar or water; then use boric solution and perhaps atropine.—**POSEY**.

SURGERY IN INDIA was held in high esteem in very remote times. They had a proverb to the effect that "a physician who is no surgeon is like a bird with but one wing." They had a large assortment of steel cutting and cauterizing instruments, and held that "what drugs and knives cannot cure may be cured with fire."—PARSONS.

COSMETIC SURGERY has scored another triumph at the hands of a Vienna surgeon, who injects a mixture of solid and liquid vaseline to remedy disfiguring depressions and voids due to the removal of natural parts as, for example, the testicle. He employs the same method to remedy atrophy of the female breast.—*N. Y. Medical Record*.

OXYGENATED WATER, while it disinfects wounds, is painful by contact to raw surfaces, and spoils catgut sutures as well as rubber instruments and leather. In employing catgut sutures oxygenated water should be avoided, since it has even led to fatal hemorrhage.—*The Medical Press*, March 13th.

ENDOMETRITIS AND SALPINGITIS.—One knows by experience that if one gets the endometrium and the pouch leading to the Fallopian tube into a healthy state, the Fallopian tube almost always recovers itself if merely in a state of chronic inflammation.—AMAND ROUTH.

COCAINE in equal parts of almond and petroleum oil, while it is slower to begin, continues to act longer than the water solution. Two per cent. is strong enough for nose and throat work. A five-per-cent. watery solution with two per cent. of sodium sulphate added acts better by reason of the penetrating power and solvent action upon globulins and proteids of the secretions encountered.—WINGRAVE.

NASAL DISCHARGES IN CHILDREN.—Do not diagnose accessory sinus trouble before the sinuses are developed; remember that the frontal sinus is not developed until the seventh year; that the antrum, although developed early, is quite small after the second dentition, and that the ethmoidal cells have not bony walls until the fourth year, and at that age they are quite small.—COBBLEDICK.

FOREIGN BODY IN THE EAR.—The rubber end of a pencil was extracted by teasing out the end of a small piece of twine, and giving this a good coating of glue, pushing it tightly against the India rubber, and packing it closely all round with cotton wool. This was allowed to remain in position for twenty-four hours, when there was firm cohesion, and not the slightest difficulty was found in withdrawing everything *en masse*.—MACASKIE.

Benson relates an instance of the end of a slate pencil being retained and causing deafness for twenty-five years, and Cullen one in which for thirty years a pea-sized piece of tortoise shell has pressed upon the tympanic membrane. In both patients normal hearing was restored.

DISINFECTION OF SOFT CATHETERS.—(1) The disinfection of catheters with bichloride of mercury is unsatisfactory. (2) The use of live steam for the disinfection of catheters is also unsatisfactory, because of the damage done the catheters. (3) The disinfection of catheters with formaldehyde vapor as hitherto practised is too slow and for catheters of

small calibre incomplete. (4) The apparatus devised by the writer enables one to render all sizes of catheters absolutely sterile in from ten to twenty-five minutes without any injury to the catheters, by the use of a strong vapor of pure trioxymethylene powder.—KATZENSTEIN, *Berliner klinische Wochenschrift*, September 10, 1900

SPINAL ABSCESS.—Do not wait to open a spinal abscess until the skin is reddened and involved. So far as possible open the abscess at certain seats of election, *i.e.*, away from the groin, and make more than one opening if possible. Carefully cleanse the cavity and rub the interior thoroughly with menthol or iodoform solution. Avoid drains of all kinds, and be careful to carry out perfect aseptic measures from first to last. Some patients improve by rest alone, the fluid portion of the pus becoming absorbed, but in many cases the abscess makes its way toward the surface, and then operation should be performed at once, before the skin and subcutaneous tissue have become infected by tubercle, or a persistent sinus may remain.—A. H. TUBBY, quoted in *Medical Times and Hospital Gazette*, February 23d.

TO ARREST SMALLPOX.—I first scrub the skin of the forearms and hands with a strongly alkaline soap and water, in order to remove the oil naturally existing in the epidermis. Then I wash the skin with alcohol to kill germs and also to remove oil. Next the skin is washed with a 1 : 500 solution of bichloride of mercury. Then it is washed with a solution of peroxide of hydrogen. Each of these washings is of ten or fifteen minutes' duration. Finally the parts are well wrapped in a thick envelope of borated cotton. The washing is repeated daily for three days. I would suggest, in addition, that the face and other parts to which the bath is inapplicable, should be treated by disinfectants spread on lint and applied to the skin. Also, when the patient is found poisoned by purulent infection, I should not hesitate to recommend the subcutaneous injection of antistreptococcic serum, and the administration of cathartics which have the power to produce watery alvine evacuations. For this latter purpose the sulphate of magnesium would stand foremost. Also digitalis and frequent draughts of water should be used to induce copious diuresis, thereby discharging ptomaines, as would the catharsis just mentioned.—ALONZO BRYAN, *The Physician and Surgeon*, January, 1901.

PULSATILLA is the remedy *par excellence* for headaches at the menstrual epoch.—*Med. Summary*.

THE monobromate of camphor is suggested in acute nasal catarrh.

HABITUAL CONSTIPATION.—I wish to call the attention of the profession to the following statements: 1. A certain percentage of individuals suffering from habitual constipation are apt to have a spontaneous movement of the bowels the following day after the stomach has been washed for the first time. 2. The majority of such patients will eventually recover the normal function of their bowels, if lavage is continued daily for two or three weeks, and later at greater intervals. 3. The best results are obtained from using cold water, or hot and cold water alternately. 4. The best time for such lavage is one hour before breakfast.—C. D. SPIVAK, *Journal of the American Medical Association*, April 13th.

GALEZOWSKI'S OINTMENT FOR NEURALGIA, according to Bocquillon-Limousin (*Formulaire des médicaments nouveaux*), is made as follows :

R Menthol.....	23 grains ;
Cocaine	7½ "
Chloral hydrate	5 "
Vaseline	2½ drachms.

M.

HUCHARD'S DIURETIC AND CARDIAC TONIC.—Bocquillon-Limousin (*Formulaire des médicaments nouveaux*) gives the following formula of a mixture employed by Huchard in cases of nephritis with cardiac weakness :

R Tincture of grindelia	30 parts ;
Tincture of convallaria	10 "
Tincture of squill.....	5 "

M.

Dose, fifteen drops, three times a day.

CAFFEINE IN THE TREATMENT OF WHOOPING-COUGH.—The *Agendo-médical* for 1901 gives the following formula :

R Caffeine valerianate.....	3 parts ;
Brandy.....	40 "
Syrup of coffee.....	500 "

M.

From a coffeespoonful to a tablespoonful, according to the patient's age, is to be given morning and evening.—*N. Y. Med. Jour.*

TREATMENT OF HYPERIDROSIS.—Crocker, without attempting to explain the *modus operandi*, says sulphur in 5i doses, twice daily, combined with astringents, if diarrhœa results, is the best remedy for hyperidrosis. Locally, belladonna ointment or liniment is useful, or finely powdered boric acid dredged with the boots and stockings every day if the feet are affected.

WARTS AND MOLES, TO REMOVE.—The growth to be treated should be walled in with a bit of wax, vaselin, or mutton tallow, and then a drop of solution of sodium ethylate placed on its very tip; after two or three minutes any remaining portion should be absorbed with a blotter. A caustic effect occurs which kills quite deeply, forming a dark scab which peels off and leaves the parts normal. If the growth is quite thick, one or two subsequent treatments may be required; but wait and see what one does before applying another.—ABBOTT (*The Alkaloidal Clinic*).

Death of an Eminent Foreign Professor.

Joseph Fodos, M.D., professor of hygiene at the University of Budapest, has recently died. He was born in 1843, studied under Pettenkofer at Munich, and later under Baron Liebig. Dr. Fodor was, after his master Pettenkofer, the best known of the European sanitarians, and did much toward rendering Budapest the healthy and beautiful city it now is. He was a man of many gifts, and was for some time joint editor of the medical journal *Orvosi Hetilap*.

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion : Established 1867.

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EDITORIAL.

ONTARIO MEDICAL COUNCIL AND THE ANNUAL FEE.

The question of the yearly assessment by the Ontario Medical Council has at last been brought to a head. It is to be hoped that those in charge will see to it that in treatment the incision is free, the drainage complete, and that healing takes place from the bottom. The Medical Act provides that the names of members of the College shall be erased when in arrears and reinstatement made without formalities or expense on payment of such arrearage.

In October last everyone then in arrears was notified by registered letter of the amount of his arrearage, on the regular form, containing extracts from the act bearing on the subject and in December, those who had not paid had their names erased from the Medical register. On April 19th, the Council prosecutor notified the delinquents, (about 700 in all) that unless the money was forthcoming within one month from date of notice, the aid of the law would have to be invoked and each would be proceeded against for the illegal practising of medicine.

This had the effect of causing many to comply with the regulations. Finding that some of these expressed the opinion that a month was too short a period of grace, the Executive granted an extension of one month (to June 19th) and so notified those concerned by circular.

The report of an interview of a member of the Government by the leaders of the Medical Defence Union recently published in an evening paper, cannot but convey a most erroneous impression of the state of affairs at present existing.

We are informed that the deputation claimed to represent six or seven hundred medical practitioners of the Province of Ontario. It is true as already mentioned that some six or seven hundred practitioners had been in arrears, and in so far as that was concerned might be identified with the deputation, but subsequent events do not show that all were in arrears for the same cause or object, and no evidence has been adduced to prove that those seven hundred as a body had in any way authorized the deputation to represent them. The deputation stated that the Medical Building was a losing concern and that the fees collected were simply being buried there.

To properly appreciate this matter some acquaintance with ancient history becomes essential. Up to fifteen years ago, the Ontario College of Physicians and Surgeons had no home and was forced to rent halls for examination purposes year by year. This was most inconvenient and did not redound to the credit of the profession. It became evident that something would have to be done towards providing a proper location for the Council headquarters, where Councillors could meet, examinations be conducted, and an office for the registrar be secured. The old church which stood on the site of the present medical buildings was finally purchased, it being considered that it would for the time being meet the main objects to be attained, viz., a large examination hall and registrar's office in a central location. Just about that time the real estate boom began in Toronto, prices rising rapidly, and following on the increase in prices, the taxes also. It was afterwards found that the accommodation afforded by the church was inadequate and not commensurate with the amount necessary to carry the property on the altered basis of taxation. In order to secure the necessary increase in facilities, it was thought wise to erect a large building in the place of the old church which would not only meet the requirements of the Council but contain a sufficient number of first-class office apartments, the rent from which would be sufficient to materially aid in carrying the whole concern, without burdensome expense to the College.

Unfortunately, ere this happy state of affairs was realized, the general crash came and the College of Physicians and Surgeons suffered, like every one of the two hundred thousand inhabitants of Toronto, from the prolonged period of depression and hard times which followed, when little more than nominal rents were paid, even in such a central location as Bay and Richmond Streets. Had it not been for that crash the building would have been more successful during the years which have passed, and those who now call it a speculation would probably have been willing to call it a fair investment.

Through all the period of depression the Defence Association has been pressing for immediate sale, and some of its members have gone to the extent in Council of urging, that it be given to the mortgagee for the amount of the mortgage, viz., sixty thousand dollars. The majority of the Council felt that it would be unwise to sacrifice a property that was sure to increase much in value within a reasonable time, when land values in the heart of the city would once more regain their true standard. This prediction has been borne out by subsequent events, for only recently one of the best land valuers in Toronto has estimated the property as being worth one hundred thousand dollars. True, the interest on the investment and the small annual deficit during these years of depression have amounted to a considerable sum, but it must not be forgotten, that in return for this amount we have an equity of forty thousand dollars in a property, first-class in every respect, in the heart of the best business section of the city, not more than a stone's throw from the Municipal Buildings and Law Courts. We do not know that the investment in the first instance was the most judicious, but we do know that the Council has had full regard to its responsibility, in guarding carefully, as trustees, the property of the profession, and one is forced to the conclusion that it was, to say the least, wise to defer sale until better times. The building is one of the main points of contention with the "Defence" Association—yet some of the leaders in this movement paid nothing even before there was any property bought or building erected.

Again, it has been stated that the profession is not properly represented in the Council. Prior to 1893 there were twelve territorial representatives sitting in the Council. An amendment to the Medical Act was secured at that time whereby five more were added, making a total of seventeen territorial representatives in a Council of thirty—17 territorial, 5 homœopathic, and 8 University and school appointees. In the election which was held in 1894 the "Defence" men made non-assessment the chief plank in their platform; nevertheless, out of

seventeen they carried only six constituencies and at the last election a still smaller number. Thus the profession by a majority of eleven to six in the first instance and in the second of fourteen to three pronounced in favour of assessment. The Act provides that the assessment shall be levied by by-law each year and prohibits all school representatives from voting upon that by-law. Consequently the practitioners have the assesment entirely in their own hands, the schoolmen having no voice in the matter.

The feelings of the profession may be estimated by a glance at the registrar's books. In 1893 not more than seven or eight hundred had paid their fees in full, the remaining twelve or thirteen hundred being in arrears. To-day this is more than reversed, for out of twenty-five hundred practitioners in Ontario there remain only *two hundred and eighty-nine* who are now indebted, and of these a goodly number have promised to pay, some instructing the registrar to draw on them for the amount they are in arrears.

It was furthermore stated that about one hundred out of the seven hundred who were struck off the register in December had paid their fees in response to the notice served on them, *many* doing so *under protest*. Of the one hundred mentioned who paid prior to the interview of the Hon. Mr. Davis by the leaders in the "Defence" movement, on inquiry we find that *not one had protested against payment*; on the contrary, many wrote letters expressing their perfect willingness to pay since everyone was going to be compelled to do so, but they *protested* against any being allowed to go free.

The contention that "they receive nothing in return for their two dollars" is not fair. Is protection against quacks and "shyster" doctors nothing? Verily we think it invaluable. The prosecution of quacks costs a good deal of money and every case brought before the discipline committee has entailed much expense, sometimes amounting to several hundred of dollars, in spite of the fact that everything is done as cheaply as is consistent with efficiency and justice.

The assessment is a mere bagatelle, the Act providing that it shall not be less than one dollar or more than two per annum. Many comparisons might be made as to assessments and methods of collecting the same adopted by other professions, but we will refer very briefly to but two. Members of the legal profession must pay to the Law Society seventeen dollars per annum. It is true that they receive something in return in the shape of law reports. These are valued by legal gentlemen at about ten to twelve dollars. While a doctor can be restored when struck off the register by simply paying arrears, the lawyer must contribute fifty dollars to the treasury in addition to his arrears.

Druggists pay a yearly fee of four dollars (and this is commuted to two if paid promptly) for which they receive *nothing but protection*.

The sooner the paying of the assessment is on an established basis and everyone recognizes the fact that it is going to be collected, the better for the profession.

F. F.

CANADIAN MEDICAL ASSOCIATION.

From what one can learn the Winnipeg meeting of this Association promises to be one of the best ever held. The railways have granted a single fare for the round trip, with the additional privilege of a single fare rate from Winnipeg to any point in Manitoba, the North West, British Columbia or North Dakota after the meeting. This of course will make a large attendance certain.

The Address in Medicine by Dr. J. R. Jones, Winnipeg, in Surgery by Dr. O. M. Jones, F. R. C. S., Victoria, and in Gynaecology by Dr. Thomas S. Cullen of Johns Hopkins makes a nucleus for the programme that will indeed be hard to beat.

In addition to these the following have promised to contribute to the programme: Drs. Gilbert, Gordon, John Hunter, B. E. McKenzie, D. J. Gibb Wishart, G. Silverthorne and G. H. Burnham of Toronto; W. S. Muir, Truro, N. S.; Laphorne Smith, Montreal; A. Armstrong, Arnprior; J. C. Mitchell, Enniskillen; Prof. Russell, of the University of Wisconsin; H. M. Bracken, the Health Office of Minnesota; F. T. Shepherd Montreal and L. H. Warner, of New York.

Judging from the foregoing list which has been supplied to us by the Secretary, the scientific part of the programme will be almost equal to the social part, and, from what little birds tell us, visiting members may look forward to a rich treat.

The Secretary, Dr. F. N. G. Starr, Biological Building, Toronto, will be glad to furnish particulars to any intending to be present.

THE CONERTY FUND.

To the Editor of THE CANADA LANCET:

SIR,—I beg to forward you the following list of subscriptions to the Toronto Clinical Society Conerty Fund:

Toronto Clinical Society	\$25 00
Dr. F. LeM. Grasett	5 00
Dr. H. J. Hamilton	5 00
Dr. E. E. King	5 00
Dr. H. B. Anderson	5 00
Fellow Sufferer	2 00
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W. H. PEPLER,

Treasurer, Toronto Clinical Society Conerty Fund.

EDITORIAL NOTES.

For Medical Research.

John D. Rockefeller, the millionaire Standard Oil magnate has made a preliminary gift of \$200,000 to establish facilities for research in medicine. Until buildings are equipped this amount is to be utilized for research in various pathological laboratories throughout America.

University of Pennsylvania Pathological Laboratory,

The University of Pennsylvania is expending \$500,000 in building a new pathological laboratory.

For the Ontario Licences.

There were one and sixty-two candidates wrote on the recent primary examinations of the College of Physicians and Surgeons of Ontario.

Medical Graduates of Trinity University.

Fifty-two candidates succeeded in obtaining the degree M. D. C. M. from Trinity University at the recent examinations.

Graduating Class Dinner.

The graduating class of Trinity Medical College, some fifty in number, dined at the Temple Café on the evening of the University Medical Convocation. Dr. C. P. Lusk occupied the chair and many members of the faculty were present, a very enjoyable evening being spent.

Class Dinner.

The Class of '92, University of Toronto Medical Faculty, had a pleasant reunion at the Albany Club, June 18th, about twenty-five being present. Dr. H. A. Bruce, a prominent member of the class, entertained them at lunch the following day.

Resident Medical Staff Hospital for Sick Children.

The following recent graduates have been appointed:—Dr. Allen B. Rutherford, Owen Sound; Dr. W. H. Lowry, Guelph; Dr. John D. Chisholm, Berlin; Dr. Margaret McCallum, Toronto. Dr. McCallum has the distinction of being the first woman medical resident appointed to such a position in Canada.

PERSONAL.

Dr. Chas. Trow, of Carlton St., has returned from his holiday in the West Indies.

We are pleased to learn that Dr. Adam Wright is being greatly benefited by his visit to Europe.

Dr. T. A. Addy, (Trin. '99) has successfully established himself in practice at Middleport, N. Y.

Dr. R. J. Dwyer, who has spent the past year in Europe returned to Toronto in June.

Dr. Corelli C. Field, (Trin. '94), of Port Hope, is doing post graduate work in gynaecology at the Johns Hopkins.

Dr. Arthur Jukes Johnson and Mrs. Johnson, of Bloor St., have sailed for Europe, where they will remain some months.

Dr. Allan Baines attended the meeting of the American Paediatric Association at Niagara Falls, N. Y.

Dr. Charles Sheard delivered an address before the National Council of Women at their recent meeting at London, Ont.

Dr. B. Hawke, of Stratford, has taken up his residence on Carlton St., Toronto. Dr. Hawke will devote his attention to diseases of children.

Dr. A. McPhedran, of Bloor street, leaves shortly to spend a couple of months in Europe.

Dr. Brock, of Guelph, has been elected president of the College of Physicians and Surgeons of Ontario for the year 1901-2, and Dr. J. H. Emory, of Toronto, vice-president of the same body.

Dr. B. L. Riordan and Dr. C. R. Dickson, of Toronto, attended the recent meeting of the American Association of Railway Surgeons in Milwaukee.

Dr. Leask (Tor. '90), recently of the resident medical staff of St. Michael's Hospital, has accepted a position as surgeon on the Central Algoma Railway.

Dr. A. Flath, (Trin. '92) who has been practising since graduation at Church's Ferry, N. D., is about to give up general practice and after spending a time in post graduate study, will take up his residence in Detroit.

Dr. Harry J. Way (Tor. '92), and formerly a member of the resident medical staff Toronto General Hospital, who has been practising in Chicago, was married on June 19th to Miss Turley, daughter of Theophilus Turley, Esq., of that city. THE LANCET offers congratulations.

The engagement of T. H. Middlebro, M.B., F.R.C.S., of Owen Sound, to Miss Thompson, of Shelburne, is announced. Dr. Middlebro graduated from Toronto University in 1892, and for the following year served on the resident medical staff of the General Hospital.

CORRESPONDENCE.

To the Editor of the Canada Lancet.

DEAR SIR,—Philosophers of the twentieth century are telling us that combines and trust corporations have come to stay, and that we, as individuals, must co-operate if we wish to stand solid and be considered among the mighty. The writer thinks that the time has arrived for the medical men to unite and form one big strong combination, a very tower of strength in the hour of need and necessity.

There are many reasons why at the present time we should join hands. For instance, most of us have heard of the dissatisfaction expressed by members of the profession at the management of the College of Physicians and Surgeons of Ontario, that conventions have been held and petitions filed with the Government, in fact, many regular practitioners have been struck off the roll for refusing to pay the annual fee of \$2.00, which fee, in the writer's opinion, has been rightly styled the dog-tax. From such a paltry sum paid annually we cannot expect to derive much material benefit.

Then there is the important question of a Defence Union. We are almost constantly hearing of one of our brethren defending himself in court against some unscrupulous person without anybody to stand by to help him, except perhaps some good hearted fellows who have joined in a private subscription for him.

These are issues that must appeal to the profession generally in Ontario.

Let the medical men of Ontario co-operate and unite to form an association with the College of Physicians and Surgeons as its head. Let them subscribe a reasonable sum, say \$10.00 or \$15.00 annually, which sum could be used for such purposes as :

- a. Medical Defence Fund.
- b. A thorough inquiry into, and, if necessary, the prosecution of all cases of illegal and improper practice.
- c. The general use of the Council building for all meetings of societies and associations, either provincial or local.
- d. The improvement and enlargement of our medical library and for such other practical purposes as may present themselves from time to time.

Yours, etc.

W. H. PEPLER.

BOOK REVIEWS.

ENCYCLOPEDIA MEDICA.—VOL., III.—DIPHTHERIA TO FOOD.

Under the General Editorship of Chalmers Watson, M.B. Published by Wm. Green and Sons, Edinburgh. Canadian Agents, J. A. Carveth & Co, Toronto, Ont. Price \$5.00 per volume.

This volume is fully up to and in some respects surpasses in interest those which have preceded it.

The first article is one of 21 pages upon diphtheria. It is most valuable, being at once concise, complete, up-to-date, and most readable. Under Etiology, the views of Newsholme upon the influence of soil and climatic conditions are discussed, and generally supported. Under "modes of dissemination," the influences exerted by schools, and milk supply receive due attention, and the statement is made that no instance exists of diphtheria having been conveyed by the water supply. Under complications the various forms of paralysis are admirably stated and the analysis showing the frequency with which the different groups of muscles are involved is instructive and complete.

Three problems in the pathology of the disease are dealt with especially, viz., the acceptance of the Klebs Loeffler bacillus as the essential cause of diphtheria, the variation in the virulence of the bacillus, and the responsibility of associated organisms for such complications as adenitis, cellulitis, suppuration, etc.

As is to be expected, antitoxin is given at once the precedence and the chief place in treatment, as being "the most satisfactory method that is known." The cardinal rule is laid down—inject early. The remarks with regard to the dose deserve quotation in full:—

"If the treatment is commenced on the first day the dose should be 1,500 units at least; it will usually be unnecessary to give more than 2,000. But if it be delayed, the amount must be increased up to 8,000 or 10,000 units, according to the severity of the case. It is advisable to repeat from half to the whole first dose within twenty-four hours if the local exudation shows no signs of resolution. With respect to the total amount to be administered, though as far as the writer knows (and he has often injected from 30,000 to 50,000 units) the limit is set only by the volume of the serum that can with convenience be injected. Yet his experience leads him to say that little is to be gained by giving more than 16,000 units during the first twenty-four hours from the commencement of the treatment.

But, again, the earlier the treatment is begun, the less necessity will there be for large and repeated doses.

As the more concentrated sera are more expensive than the less concentrated, early treatment is more economical."

Under "local treatment," preference is expressed for flushings of the affected regions with a saturated warm solution of boracic acid, while the use of chlorine, in carbolic acid is deprecated.

Strange to say, the writer, following the English custom, prefers tracheotomy to intubation, and in the latter case advises the removal of the tube every second day.

There are a number of other articles equally interesting, such as those upon the Ear, Eclampsia, Ectopic Gestation, Epidemiology, the Eye, Filariasis, Food, etc.

The list of contributors includes such well known names as those of Goodall, Barr, McBride, Cheatle, Halliday Croone, Dalziel, Jobson Horne, Nuttall, etc.

D. J. G. W.

PRINCIPLES OF SURGERY.

By N. Senn, M.D., Ph. D., LL.D., Professor of Surgery in Rush Medical College in Affiliation with the University of Chicago; Professorial Lecturer on Military Surgery in the University of Chicago; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; Surgeon-General of Illinois; Late Lieutenant-Colonel of United States Volunteers and Chief of the Operating-staff with the Army in the field during the Spanish-American War. Third Edition. Thoroughly Revised with 230 Wood-engravings, Half-tones, and Colored Illustrations. Royal Octavo. Pages, xiv—700. Extra Cloth, \$4.50, Net; Sheep or Half-russia, \$5.50, Net. Delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry Street.

This is essentially a work on Surgical Pathology. Every point is discussed from a Pathological standpoint, and, where necessary, Physiological and experimental arguments are brought to bear. This latter is well exemplified in the section on wounds and degeneration of the more highly specialized organs. The phenomena signs, and results of inflammation are discussed at length and the condition given the space and place that its importance demands.

Infections, local and general, and bacterial diseases generally are well arranged and clearly put. The Bacteriology is of the higher sort and is applied in a most pleasing and practical manner to the clinical manifestations. Surgical tuberculosis occupies an important place, and the other infectious granulomata receive due attention. There is an interesting section devoted to blastomycetic dermatitis.

It may be said of treatment generally that all known methods are given their place, being approved of or disapproved of according as they present a logical application to the Pathology of the condition.

It is pleasant to peruse a work where the arguments are so well made and the conclusions so well drawn, and one which so clearly shows the grasp the author possesses of his subject.

H. C. P.

SAUNDERS' MEDICAL HAND-ATLAS AND EPITOME OF SPECIAL PATHOLOGIC HISTOLOGY.

By Doctent Dr. Hermann Durck, Assistant in Pathological Institute in Munich. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, Chicago.—W. B. Saunders, Philadelphia, J. A. Carveth & Co., Toronto, Canadian Agents.

This is the first volume of a series of three intended for the guidance of the student in his histological work, the idea is to give an epitome of the pathology, as practical and concise as possible, of special organs, this being illustrated by a series of drawings made from sections in the possession of the author. This volume deals with the heart and circulatory apparatus, lungs, and digestive tract. The drawings are excellent and well explained by foot-notes. The Epitome is necessarily brief, but gives the main points, and those clearly. The work should prove of great value as a guide, but as the author well says in the preface, "its use will yield good results only when combined with the study of preparations under the microscope.

Its use in our laboratories would undoubtedly be productive of great benefit to the students, and a great assistance to those demonstrating.

H. C. P.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS.

A Practical Exposition of the Methods, other than Drug Giving, Useful in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson College; Physician to the Philadelphia and Rush Hospitals, etc. Volume I., Electrotherapy, by Geo. W. Jacoby, M.D., Consulting Neurologist to the German Hospital, New York. etc. In two Books. Book I, Electrophysics—Apparatus Required for the Therapeutic and Diagnostic Use of Electricity. With 163 Illustrations. P. Blaikiston's Son & Co., Philadelphia, 1901.

The publication of a system of Therapeutics in eleven volumes, dealing with methods other than drugs useful in the treatment of disease surely marks the commencement of a new and happier era in the practice of medicine. Such a publication is a natural sequel to the more rational conception of disease based on etiology, pathological anatomy and physiology which forms the groundwork of medicine at the present time. It cannot be denied that the regular school of physicians in even recent times have placed too much faith in the use of drugs, often to the neglect of other methods of far greater importance. This furnished the golden opportunity for quacks, Christian scientists, magnetic healers, faith curists, osteopaths, homœopaths and the scores of "irregulars" who

have too often profited by our mistakes. It is a simple statement of fact to say that cures have frequently been obtained by these "irregulars" that have brought discredit to medical science, simply because most valuable methods of dealing with disease were ignored and left to the quacks and faddists. We welcome the publication of this system of physiologic therapeutics because it will place on a reputable and scientific basis, and within the grasp of the profession generally, the value of therapeutics without drugs. The work is deserving of a place in the library of every progressive physician, and the profession owes a debt of gratitude to the editor, authors and publishers in placing it within their reach. The first volume deals with Electrotherapy, Book I of the volume—containing 242 pages—describing particularly the apparatus required for the therapeutic and diagnostic uses of electricity. This useful but rather uninteresting phase of the subject is fully dealt with and well illustrated. The volume is handsomely executed, the presswork being very creditable. The publication of the subsequent volumes will be awaited with much interest.—H.B.A.

PUBLISHERS' DEPARTMENT.

THE "PAPYROS EBERS."

Believing that physicians, of all men, are most interested in the history of their art, the makers of HEMABOLOIDS are now prepared to present to their friends in the medical profession a fac-simile reproduction of the beginning of the earliest medical treatise extant, together with transcription into hieroglyphics and translation of a portion of the text.

The famous "Papyrus Ebers," which was written during the reign of the Egyptian king Bicheres, 3,500 years ago, was discovered by the celebrated archeologist, Georg Ebers, in 1872, when an Arab brought him a metallic case containing a papyrus roll enveloped in mummy cloths, which he claimed had been discovered between the bones of a mummy in a tomb of the Theban Necropolis. A complete description of the papyrus and its history is included in the reproduction and is certainly extremely interesting to physicians and antiquarians generally. A copy will be forwarded by The Palisade Mfg. Co., Yonkers, N. Y., to any physician who may have failed to receive one.

SCIENTIFIC AND PRACTICAL FACTS ABOUT DIARRHOEA.

Prof. White, of the University of Dublin, proved by careful detailed studies as to the action of Angier's Petroleum Emulsion upon the various micro-organisms that inasmuch as petroleum offers no food for bacteria, they cannot thrive in this medium; consequently petroleum is both aseptic and antiseptic. By an elaborate series of laboratory experiments, Dr. White found that the petroleum emulsion inhibited alcoholic, lactic, and butyric fermentation, as well as the growth of putrefactive bacteria which have their natural habitation in the intestinal canal.

Dr. W. D. Robinson, a well known authority on diseases of the stomach and intestines states in the Medical News (July 14, 1900): "I have extensively given petroleum and salol four times a day, and reclaimed the oil from the feces and found it to contain some salol and its components, phenol and salicylic acid. This proves the carrying of a chemical antiseptic and antiferment through the entire canal. It is a solvent of iodine, sulphur, betanaphthol, naphthaline, menthol, thymol, camphor, and iodoform." By combination of any of the antiseptics mentioned with petroleum a germ-free condition of the intestinal canal is assured and which is not, according to the highest authority, obtainable by any other means.

Dr. Fothergill, director of the Clinical Laboratory, Manchester Hospital, England, employed the unusually large resources of his clinic to determine how infantile diarrhoea could be satisfactorily treated. This authority reported (Medical Chronicle): "Petroleum Emulsion was used in thirty-four cases. One child died. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhoea was checked, and the stools soon recovered their normal color and consistency. The emulsion seemed also to favor recovery from the accompanying bronchial catarrh. These experiments seem to prove that infantile diarrhoea can be treated successfully without the use of opium or astringents."

It is for these reasons—inhibition of germ life, sedative healing action on ulcerated and inflamed intestinal mucous membrane, etc., that Angier's Petroleum Emulsion has been so successfully employed in constitutional and intestinal affections associated with diarrhoea.

There are many reasons why Angier's Petroleum Emulsion is so extensively employed in bronchitis and the various inflammatory affections of the respiratory organs incidental to the winter months. The first and most potent of these reasons is the universally attested clinical fact that the remedy *quickly and completely* cures these conditions. Equally true is it that the Emulsion exerts its curative influence in both the *acute* and *chronic* forms of bronchitis. It is not, however, a matter of wonderment why this is true, when a moment's thought is given to the pathologic conditions existing in these respiratory disorders. The mucous membrane is congested, swollen and often covered with the disordered secretions—tenacious, adherent, viscid mucus. From this engorgement and the presence of the disordered secretions—which act as any other foreign body and produce irritation—result the symptoms of bronchitis, laryngitis, etc. Frequent cough results from the irritating presence of the retained secretions on the abnormally sensitive ends of the nerves in the respiratory mucous membrane. Expectoration is difficult and indeed practically impossible, because the secretions are firmly adherent and there is insufficient lubrication to facilitate their removal. Bronchial distress, always present, is but increased when strong expulsive efforts are made. Hence in these acute congestions and inflammations of the respiratory organs there is needed a remedy which lubricates the tissues, and at the same time has a sedative influence upon inflamed, engorged

mucous membrane. This is exactly what Angier's Petroleum Emulsion does. It has been well proven that by reason of its capillary action petroleum is capable of passing from the pharynx through the glottis into the larynx, and even far down into the bronchi. It is first of all a lubricant—it loosens the adherent secretions and renders their removal by expectoration an easy process.

LAXATION IN CONSTIPATION.

By J. A. RENE, M.D., West Superior, Wis.

The successful treatment of constipation does not consist in simply momentarily relieving the overloaded intestinal organs, because some of the pathological conditions co-existing may persist even after this result has been obtained.

The fact that there is an intimate association between the intestinal and cerebral functions was early recognized by the ancients—a fact that shows the need of attending to the cerebral disturbances while correcting the pathological conditions of the gastro-intestinal tract.

The habitual use of purgatives is not to be encouraged, as it only increases the disability which they are intended to remove; and therefore it is essential that the treatment should be one aiming at permanent results as well as relief. And for that reason it is very often necessary to combine drugs that will not only relieve the constipation, but also cure the other pathological conditions which might have been the primary cause of the constipation, or have been brought about by the constipation itself.

Of late years many preparations have been placed at the disposition of physicians, and some of these preparations are certainly scientific combinations. Most of them contain such splendid remedies as belladonna, aloes, cascarn, etc., but of all the recent preparations which have come to my notice I have found the Laxative Antikamnia & Quinine Tablets to be the most efficacious in relieving cerebral disturbance, as well as curing the intestinal trouble.

A close study of this combination shows that it is a tonic-laxative, analgesic and antipyretic—and its administration in certain cases is sure to be followed with excellent results. For instance, in the sequelæ of typho-malarial cachexia, when a gentle and safe laxative combined with an anti-periodic is required, I have found this preparation of the utmost value. The co-operative or synergetic properties of these ingredients will readily commend themselves to the profession.—*Chicago Medical Times.*

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THE CANADA LANCET

VOL. XXXIV.

TORONTO, JULY, 1901.

No. 10.

ORIGINAL ARTICLES.

PRESIDENT'S ADDRESS, ONTARIO MEDICAL ASSOCIATION.

BY ANGUS MACKINNON, M. D.
Guelph, Ont.

Last year when I was informed that I was the president elect of this, the largest and most influential Medical Association in the Dominion of Canada, I felt that an honour came to me that should more properly have gone to someone more capable than I am, to preside over this noble assemblage, with the ability and dignity that the occasion demands. I was content as a worker with my professional brethren to continue my efforts to make these, our annual meetings, both interesting and instructive. I keenly feel that I owe this honour to your very great kindness to me, rather than to any fitness in me to fill the position, or to any claims I had upon the Association. I know too, if I fail to acquit myself in the perfect way that my predecessors have done I shall receive from you a full measure of sympathy. When I look at the roll of the distinguished men who have preceded me in this chair it makes me feel all the more that your choice on this occasion might have been more fortunately made. I need scarcely say that I appreciate your kindness and I am very grateful for the distinguished honour you have conferred upon me.

I am fully confident that this meeting will be a successful one. I have been enabled with the generous assistance of our energetic Secretary to surround myself with earnest, clear-headed men on the various committees, that really do the work which commands success. To them we owe much. They have been untiring in their efforts and when you look at the comprehensive programme which maps out the work of the meeting you will understand they have had no sinecure. If we can make time to carry out the work represented in the programme I am quite sure the meeting will be most interesting and instructive, and I venture to hope, one of the most successful in the history of the Association.

Before I go further I wish to extend to our guests the right hand of cordiality and to say to them that I do not know aright the members of the profession resident in Toronto if by any chance they fail in being made to feel wholly at home. We invite them to take part in our discussions, giving us the light of their experience.

Indeed the highest success of such a meeting as this can only be attained when every member feels it his duty to contribute what he can to the discussions. Innate modesty is all very well, but here we are a band of searchers after truth, burning with desire to know all that can be known as to the best methods of battling with disease, of relieving suffering, and of saving human life. It is not much short of a crime if any member through modesty keep silent if he has any knowledge to impart. It may not be necessary thus to encourage our brethren from the larger centres to speak in the discussions—they are accustomed, as teachers in the schools or members of the various Medical Societies to discuss any subject. But I do wish that the members from the country be not too modest. Their isolation compels them to be keen observers and necessarily self-reliant, and I am quite sure the discussions will gain in interest if they take a fair share in them.

We have entered a new century. Contrasted with the state of Medicine at the beginning of last century what vast advantages we possess. The discovery of anæsthesia about the middle of the last century and of the proper use of antiseptics twenty years later, and of the real meaning of surgical cleanliness at a still later period, have opened a wide field for advancement in which this century has grand opportunities to make medical history. If we fail to make even greater progress than ever yet made we must consider ourselves less studious, less observant and less capable than our predecessors.

Surgery is now almost wholly different from what it was twenty years ago. There are prominent and successful surgeons who affect to despise the great attention given to antiseptic details which others think essential. But this much is true of all—every surgeon aims at being aseptic, if not antiseptic, in his methods. The man who is faithful to the idea of asepsis, even if he laughs at the use of rubber gloves in operations and makes light of other details, is still influenced unconsciously by the teaching of the great Lister. It is true that although the ritual which was once thought essential is fast disappearing the results obtained under present methods are equally good.

In Medicine the immense benefit to the human race by the discovery of vaccination at the beginning of the last century has been almost equalled by the discovery of antitoxin for diphtheria in its closing years. As to tuberculosis although the bacillus which is looked upon as its cause has been successfully isolated, we are still without an antitoxin for it. Cancer and other forms of malignant disease from year to year cause much suffering to the human race and claim many victims. From the vast amounts of profound study devoted to these diseases I am sanguine enough to hope that the dawn is not far distant of that grand and glorious day when we can say to the world that tuberculosis and cancer can both be cured. Is it a dream? Not more than it would have been twenty years ago to say that a cretin could be cured. Anything more absolutely hopeless than the state of the unfortunate cretin till the use of thyroid extract was discovered could not be. Then let us hope that soon a great discovery will enable us to deal with cancer and tuberculosis with the same success that has crowned the use of thyroid extract.

In *Materia Medica* the new century opens with wonderful surprises. The improvements and changes follow each other so rapidly as almost to make one's head dizzy. If the pharmacists continue to pour out upon our innocent profession new drugs with impossible names as they have been doing in the past few years it will be a sad time for the future students of medicine. The old *Pharmacopœia* groaned with the load of useless drugs, but the *Pharmacopœia* of this century must be immensely larger in case even a few of these drugs win their way into medical confidence. Try, if you please, to imagine what the gifted Abernethy would say if recalled to human existence and you named over to him some of the newer drugs, for example, stypticin, dionin, largin, hydrozone, mercuriol, euprol, nargol, ferrinol, anusol, etc.

Whilst I cheerfully give great credit for the elegant preparations manufactured by the pharmacists of the present day I cannot but believe that some large manufacturing firms on both sides of the Atlantic, but chiefly on this side, are doing very grave injury to the medical profession by putting up elegant preparations either as pills or mixtures, according to certain formulæ. For example, a pill for a cardiac tonic, a pill for neuralgia, for malaria, etc. These preparations are on sale at every drug store and I think the medical man is the wiser who writes his own prescription however simple it may be instead of making use of any of these combinations. No medical man should allow any one to think for him as to what his patient needs, nor should he permit any manufacturing druggist to use him as a sort of advertising agent for his products. In many parts of this Province the literature and drugs sent out to medical men by large manufacturing concerns have become an intolerable nuisance.

Our noble profession which gives its all to the relief of suffering humanity, has attached to its skirts many things which are not clean. I might mention the advertising cancer-curer, the Osteopath, the so-called Christian Scientist, whose religion in claiming to be Christian is as much a fake as his science, the electric belt man, and many others. It is our duty to the public to warn them against these, that they be not deceived. They are all frauds; but there is a far greater fraud. I refer to the manufacturers and vendors of the various patent medicines. Under a claim that some new medicine of rare virtue is known to them alone, or that they have discovered some new combination of drugs that has marvellous potency, they push their sales by advertising in the most grossly fraudulent manner. Men's names are attached to testimonials they never wrote, certifying that they have been cured of diseases they never had, in order to lure unfortunate victims of these diseases to use their so called remedies. Not satisfied with advertising like the ordinary business man, they stipulate that their advertisements and testimonials shall appear like the ordinary reading matter of the paper, thus trying to lead the unwary to think that the paper in which the advertisement appears really endorses their impudent claims. The press, I regret to say both secular and religious, with rare exceptions, open their columns freely to these fulsome, untruthful and sometimes immoral advertisements, because they pay well.

Here lies a large mission-field for our profession. We must teach the people that wrong, and wrong only, can come to them from such un-intelligent use of medicine. We must appeal to the manhood of the capitalist that it is in the last degree dishonorable for him to try to make large gains by thus committing a fraud on the sick. And eventually we must strive to secure such legislation as will mark the man a criminal who uses such means to sell drugs.

Before such a legislation can be secured, or even if secured, before it could be enforced, the public must receive a very considerable degree of education from the medical profession. To accomplish this end every medical man must look upon himself as a missionary in the cause of science and truth. He will require to direct his efforts to enlighten the people as to the properties of the various drugs in common use, the nature of the common diseases, their causes, and that there is no dark secret as to the methods by which he endeavors to cure them. He must show that he is a constant student and a close observer. It must be quite easily seen by the people that the saving of life and the curing of the sick are more dear to his heart than are the shekels that should come to him as a reward of his honest labor. By such a course the influence of every medical man will grow upon the people.

The masses of the people even at this day are deplorably ignorant so far as anything relating to disease is concerned. They know nothing beyond the worse than useless things they read in the newspapers, and quack advertisements. Many men are woefully ignorant in medical matters, in the knowledge of disease and its treatment, who are in other matters fairly intelligent. Clergymen, lawyers and successful business men are often the dupes of the veriest quackery. If the mission of the medical man was fully accomplished these things ought not to be so.

I referred to the semi-religious, "pray-for-hire-healers," known as Christian Scientists and allied to them are the Dowieites. Thus far the medical profession has treated these people with ridicule or ignored them entirely. If they confined their efforts to the unfortunates who imagine they have ailments they have not, we could well afford to continue thus to treat them. But when we find them impudently undertaking to treat infectious diseases, such as diphtheria, scarlet fever and small-pox, diseases which they are unable to recognize, we think we have come to a point where toleration and forbearance become criminal. We have a right to insist, in order to protect the people from the spread of these diseases, that no man or woman shall be allowed to treat disease, by any means whatever, who has not had the training necessary to enable him to know the character of the disease he undertakes to treat. These people deny that disease exists and, of course, do not report to the proper officers any case of infection. They go in and out amongst the infected and allow others to do the same; thus criminally and at variance with all health regulations, they are doing all they can to spread these infections.

Surely it is time the 2,500 medical men in Ontario raised their voices and used all their influence to obtain from the Legislature such an amendment to the Medical Act as will put an end to this trifling with human life. Medical men are now compelled under a penalty to report

every case of infectious disease to the proper authorities, in order that its spread may be prevented. But these people trading under a religious name do not report any case and undertake to treat everything. Why should it be so?

On many questions which affect the relation of our profession to the public the education of the people is of much greater service than legislation, but on the action of these religious healers who profess to cure the sick by praying for hire, nothing less than very stringent legislation will meet the case. These people must be taught that infectious diseases are not to be spread by them, under any cloak, religious or otherwise. Toleration towards religious belief is very commendable, but toleration of a vile fraud, of which the name is the only Christian thing in it, ceases to be a virtue.

There is another matter on which I wish to speak very briefly before I close. For many years there has been a great deal of friction about the admission of cases of acute mania to the asylums. Every medical man, except those in the immediate locality where there are asylums, knows about the delay that occurs before a patient can be got into an asylum, no matter how urgent the case may be. The regulations that are in force provide that a medical man in whose practice a case of insanity arises must apply for a formal application or history paper which must be filled in and sent to the medical superintendent. If the patient has means for his support a form of bond is furnished which must be filled in and sent to the bursar before the medical certificates are issued. If the patient lives fifty miles or further from the asylum, even if the papers are executed immediately on their arrival at each end, the delay by their transmission both ways in the mails will cover from seven to twelve days or longer. In any case of acute mania this state of things is wholly wrong and surely unnecessary.

The regulations require to be looked into and amended in the interest of the general public. All the necessary forms for the committal of the patient to the asylum should be procurable at once, and in some central place in every county, without having to wait days and days for the delivery by mail of, first a history paper; later on a bond; and, by and by, the blank medical certificates. Meanwhile the friends unaccustomed to the care of such a case reach a state of mind scarcely more sane than that of the patient himself. I beg to suggest that a strong committee of this Association be appointed to consider this matter and to confer with the proper authorities in order to obtain some redress. It might be urged against this that the depriving of a man of his liberty should not be too easy of accomplishment. This objection cannot apply because it is not desired to make any important change in the papers for admission and the persons who now pass judgment upon the case would still do so. The needless delay due to the transmission of the necessary papers by mail can and must be terminated.

From year to year from this chair reference has been made to the desirability of having a medical act for the whole Dominion of Canada, instead of permitting matters to go on as they have in the past—each Province having a separate act of its own, the license to practice medicine

being limited to the confines of one province. In view of the many advantages a Dominion act would confer especially on the graduates from Medical Colleges in the Dominion of Canada, at home and abroad, we of Ontario, should be willing to make any reasonable sacrifice to attain that end, excepting always, any course that would lower our present high standard of examination. I cannot say that the bill introduced into the House of Commons by Dr. Roddick is wholly satisfactory. I am hopeful that there is in the profession, wisdom enough to draft such a measure as will remove the objections to Dr. Roddick's Bill.

If it be thought the best course that each Province surrender the control of medical affairs to a single Medical Council for the whole Dominion, then such a Council must be representative in character, and largely, if not wholly, elected by the medical profession. It must hold its examinations at least once a year in the capital of each Province. On the other hand if the control of medical affairs is to remain in each Province some inexpensive scheme should be devised to have the examinations exactly the same in the whole of Canada. The degree or the license thus obtained would cover the whole Dominion and would be recognized in any part of Great Britain and would entitle the holder to appointment for the army or navy.

The Dominion of Canada, our great country, has risen to the notice of the whole world in the past few years. There is no possible doubt that ere two or three decades pass, her place in the world will become much more important. And though we may find many things to admire in the great people to the south of us, we are to-day at heart more thoroughly British than ever before. We are proud to be a part of that great Empire whose flag protects its humblest citizen in all his rights, as to life and property, of that great Empire whose laws are just, and justly administered by impartial judges.

The destiny of this country is clearly to fill a large place in the councils of this mighty Empire. In medical affairs let us seek so to act that nothing shall remain to hinder our graduates from occupying any position for which they are fitted, in any part of this Empire.

A CASE OF LARYNGEAL STENOSIS FROM PAPILOMATA.*

By GEOFFREY BOYD, B.A., M.B.,

Lecturer on Clinical Medicine, University of Toronto.

R. W., aet. 6½ years, admitted to the Hospital for Sick Children, Dec. 20th, 1898, with loss of voice.

Family history unimportant. Two other children subject to croup.

Personal history. Had several attacks of croup. Had measles when 4 years old ('96) and in following spring ('97) became hoarse. Since then the voice was gradually lost. At the time of admission to the hospital it was just a whisper, but the cough was dry and harsh, especially after being out of doors.

Physical examination. Respiratory, circulatory and other systems normal; white papillomatous patches on anterior part of vocal cords. Tonsils hypertrophied.

On Dec. 7th, under chloroform, the larynx was curetted by Dr. McDonagh. While under the anæsthetic the patient had a "spasm" resembling a carpopedal contraction, followed by great difficulty in breathing and cyanosis (tetany and spasm of the glottis). After operation there was a troublesome, croupy cough and much inflammation of the larynx, which gradually subsided on Dec. 21st. It was seen on examination that the left cord was free of growth. Slight growth on the right.

Dec. 28th. Vomited and complained of pain in the stomach. Cough increased, with inspiratory whoop and expectoration of yellow viscid mucus; it became more paroxysmal and assumed all the features of pertussis.

Jan. 5th, '99. Inspiratory stridor was noted with recession of the soft parts in the upper thorax, and on examination membrane was seen in the larynx. Patient was isolated, antitoxin given, and calomel fumigation was also resorted to. Klebs-Löffler Bacillus was found next day and the child was transferred to infectious ward under my care. Here he remained until the 20th, passing through the laryngeal diphtheria without trouble, although there was slight stenosis. On 24th Jan. the note in the history is that there is still a paroxysmal cough and that he is to go home and return in the spring for further treatment. Owing to the absence from the city of Dr. McDonagh, the patient was again put under my care. Jan. 29th, temperature rose to 103½ with sharp pain in the throat, lasting only a few minutes, but followed by great dyspnoea. On laryngeal examination there was marked redness extending to all parts of the larynx free from growth. More growths were on the right than on the left side. This acute laryngitis was treated by steam inhalations and expectorants, but the dyspnoea continued, with evidence of increasing stenosis and occasional attacks of laryngeal spasm with cyanosis. Relief from spasm occurred after expectoration of a small amount of blackish mucus. Intubation was therefore done on Feb. 5th as a temporary measure, the tube for a 4-year old child being used. Great relief immediately followed. The tube being small was coughed out sev-

* Read before the Toronto Clinical Society.

eral times in the course of the next few days, and the next size larger could not be introduced without force and therefore greater danger of detachment of portions of the growths. On Feb. 9th, the tube was expelled, and as there was no dyspnoea nor recession of the soft parts of the thorax, it was not replaced. Slight attacks of nocturnal laryngeal spasm, with



dyspnoea occurred, easily relieved by steam inhalations. He was seen frequently and was comfortable and the breathing free. If there was any return of the stenosis, tracheotomy was to be performed. On the night of Feb. 11th, a sense of laryngeal spasm occurred and before a tube could be inserted he stopped breathing. When a tube was introduced

efforts at resuscitation were employed for 30 minutes without success, although air entered the chest freely.

Post mortem examination: the usual signs of asphyxia were present,—lungs dark and full of blood, becoming red after exposure to the air; small dark portions of collapsed lung appeared all over the surface, especially at the base of the right lung. Both chambers of the heart were empty. Wall of the right ventricle very thin. No clots were present. Liver, spleen and kidneys congested.

Larynx. Large papillomatous growths are seen especially on the right side in the position of the vocal cords, completely covering them. Papillomata are present also in the right ventricular band, the interarytenoid fold and in the infraglottic portion of the larynx. The growths are larger and more numerous than appeared the case on laryngeal examination.

Remarks. Papillomata are the commonest (39 per cent.) of the benign growths occurring in the larynx and are found frequently in children. They spring usually from the vocal cords, especially the anterior parts and the anterior commissure, but also from the ventricular bands, the ary-epiglottic folds, rarely from the epiglottis and interarytenoid folds. As to their cause, they may occur congenitally or as the result of irritation. In the case under consideration the growths apparently were not congenital, for there were no voice symptoms until $4\frac{1}{2}$ years and then after measles. It is possible, though that they may have been present from birth but not in a position to cause symptoms, and that the attacks of croup which he had in infancy were a result of the papillomata. There seems to be no doubt that as the result of the diphtheria and the subsequent laryngitis, the growths increased in size and number, evidenced both by local examination and by the signs of stenosis present, especially in the latter attack. The treatment in children is unsatisfactory, not only from the difficulty of operating intra-laryngeally but also from the tendency to recurrence. If there is no respiratory difficulty, operation may be deferred until the child becomes older and gains therefore more self-control, when intra-laryngeal methods may be tried, or curettement under general anaesthesia, repeated if necessary, often is successful in eradicating them. But if there is dyspnoea, tracheotomy should be done, and at the same time the removal of the growths by a thyrotomy or sub-hyoid pharyngotomy; or else the removal deferred to a later date and intra-laryngeal methods used. G. H. Mackenzie, of Edinburgh, recommends tracheotomy alone and cites cases to show that under the functional rest gained thereby, the papillomata shrink and fall off without any tendency to recur. Intubation has been recommended to relieve dyspnoea and by pressure of the tube to promote absorption.

In this case tracheotomy was always kept in view, but was not done owing to the improvement following intubation and its continuance after removal of the tube. It is to be regretted that it was not done in spite of the apparently good condition of the child, then all danger from the nocturnal laryngeal spasm would have been removed, but this is another illustration of wisdom gained after the event.

SEALING IN THE NORTH ATLANTIC.

JOHN MACWILLIE, M.D., C.M.

Ship's Surgeon on the Sealing Steamer "Algerine."

For the first time in the history of the sealing industry of Newfoundland, a record running back over a century, there was provided this year a surgeon for each of several of the vessels of the fleet.

This advance in consideration of the health of the large number of men, over 4,000 on 18 vessels, was due to the untiring efforts of the Rev. Dr. Harvey, of St. Johns, a man who has done more than any other for the welfare of Newfoundland, and the ex-Governor. The administration of carbolic acid in mistake for black draught as a climax to a long list of deaths which have happened through lack of knowledge, was an excellent lever to move the vessel owners to a fuller sense of their responsibility for the lives and well being of these hard-trying sealing men, and it is hoped that the experiment of this year will be the constant practice, and that the time of septic wounds, so frequently resulting in the loss of fingers, of blue pill and of curses as remedies for all ills, will give way to rational and scientific treatment.

The interest in a trip of this kind lies not only in the professional side, with the new conditions in which we see disease—our slums are well kept hospitals in comparison—but also in observing the ways and character of, to us, a new people, of visiting the country which is fast becoming the most popular vacation resort in America and of participating in this most exciting sport.

Our party of three left Toronto on March 5th and were joined at Sydney by the fourth. Here we rested with rising and falling hopes of soon becoming acquainted with the steamer which was to take us to that land which Burns knew of in his "Twa Dogs" as

"Some place far abroad

Where sailors fish for cod."

But the "Brnce," a beautiful Glasgow built vessel of the Reid line, comes at last, and none too soon, for a few hours later would have given us this seventeen hundred mile journey for nothing. We arrived at St. Johns a short time before the sailing of the fleet on Saturday morning. It is Newfoundland's greatest day. At seven o'clock, as we are enjoying breakfast with our good friend Dr. Harvey, we hear a steam whistle. Then for an hour the din and noise of gongs, whistles, bells and men, make us think we are again in Toronto on Pretoria day. St. Johns is full of it—beautiful St. Johns, but we have no time now to enjoy its beauties, our boats leave at 8 o'clock and we must catch them. Time, tide or sealing vessel waits for no man this morning. We have barely time to say good-bye as we, one by one, turn from the main street to the wharves at which our respective vessels lie. Mine is the last, and on reaching it I find the "Algerine" straining at her stern line and three or four feet from the side of the wharf, for as 8 o'clock comes every cap-

tain endeavors to get his vessel off first. With a run and a jump and I am aboard, hand bag, camera and all, and then my trunk comes—thrown after me, and with thankfulness I sit down to recover my breath. Soon however one gets in touch with the absorbing interests of the day. Now it is "our" vessel and "our" crew and the crowded wharves. All St. Johns is here. The church services and the Governor's address of yesterday are over, and now they are bidding farewell to the 4,000 men, on whose success depends the stand or fall of shipowners, of merchants and the food and clothing for these men and their families for a portion of the year.

"Up anchor" comes the command, and with a jump the wince starts. Then amid the groans of the crew it "fouls." Eight o'clock, and she begins to work. Soon our starboard anchor appears above the water, but alas, it has caught up a chain which must be cast off. One by one the vessels clear. A little swearing—not much, for these people seldom use oaths, more work, and amid cheers for all and three more cheers for Capt. Greene, we are off; last of all but ere night comes we are ahead of all.

The day is warm and bright and as we traverse the half mile or more to the mouth of the harbor we have an opportunity to enjoy the view of the city and harbor. The harbor is a mile long by half a mile wide and enclosed on all sides by hills some hundreds of feet high, entrance being gained by a channel two hundred feet wide at the northeast end. The city is built on the north side hill, and from the deck the tiers of streets, as mammoth steps show off magnificently the great cathedrals and other large buildings for which it is noted. As we leave the harbor the vessel becomes the object of my interest. The Algerine is an ex-British war vessel, re-hulled and fitted up for this trade. Those specially built for the work are upwards of two hundred feet long by thirty feet wide, and capable of carrying six hundred tons, all are single screw steamers, of eight to ten knots, and are assisted by sails. The hulls are massively built, of steel, oak, and teak, and are from twenty to twenty-five inches thick and all is needed, for excepting the first and last two days of the voyage, the ship is constantly pounding through ice, ranging from a few inches to three feet in thickness, an experience which any of the great transatlantic lines would not survive for one hour.

With steam and sail we speed on after the hurrying fleet. In sight of land until evening one does not feel too far away from the world, but what a world! If one were to judge from this shore, cold, bleak, barren, red rock. But this is Newfoundland from the outside. Our course is almost due north and by midnight we enter the great ice field, which extends northward past Belle Isle, and eastward for from fifty to one hundred miles, and in this we are to cruise until our cargo is complete, or coal or food runs out.

The seals found in this area are not fur bearing but the commercial value is in the skin and fat, and those found are of two main varieties, Harps and Hoods. This is the breeding season and the Harps congregate generally near the Funk Islands, in a herd covering an area of fifty to seventy five square miles. The adult is from four to six feet long, and weighs about four hundred lbs. It is covered with a large area of short, stiff, black hairs on the back, and the rest of the body is covered with

grey hair. The pups, which are worth one dollar a quintal more, have a soft white hair until they take to the water, at two weeks of age, they then weigh seventy five to one hundred pounds. The Hoods congregate about twenty miles to the east or outside of the Harps and are a comparatively small herd, this being the first year in six, that they have been found. It is so termed because of the sack like development of the skin covering the head of the male. An aperture connecting it with the nose enables it when attacked to inflate this sack to the size of a football, and no amount of pounding upon the head can then have the slightest effect. It is the seal commonly known in our zoological gardens as the sea-lion, one of my trophies of the chase was the hide of one which measured nine feet in length and weighed when alive about nine hundred pounds.

For two days we pounded through the ice, at full speed. Frequently we were brought to a full stop as the vessel struck a larger pan* than usual. Many small islands were passed, but night closes in without further signs of the seals. During the night the wind packed the ice more closely and on Tuesday morning we were almost fast in it. Four other vessels in sight are all in a like predicament. One had all her men out on the ice endeavoring to tow her to more open water. After four hours of shoving, ramming and going astern we managed to get clear of the jam and at nine o'clock we strike a skein from the Hood-herd. We skermished with them for an hour, bagging about one hundred, and then went due west to seek the more valuable and more easily caught young Harps. At one o'clock on Wednesday morning the captain came to my stateroom and in an excited voice called, "We'er into them Doctor; we'er into the swoiles.† I half dressed and went on deck. The hum of excited voices came from the mens' quarters, while from all directions could be heard the plaintive cry of hundreds of baby seals, some quite close to us, but it was too dark yet to see. There was no more sleep for anyone that night, and, by five o'clock all had breakfast and were eagerly preparing for the days work.

THE SEAL HUNT.—It is just daybreak, and a half dozen other ships are in sight. Seemingly having as ourselves just come in, our crew is divided into three watches, or gangs, each under the orders of the "master of the watch." The men are dressed in top boots made of sealskin, canvas out clothes and hats or caps of as great variety as there are number of men. A rope six feet in length is wound over the right shoulder, under the left arm, a belt to which is attached a knife in its leather sheath, and a steel, a canvas bag containing hard tack, and a gaff of wood six feet long with an iron spike and hook attached to one end, complete's each man's equipment. A few wear green or smoked goggles, and ten or more of each watch carry the ice flags attached to ten foot poles.

As the captain orders the first watch to get ready there is a scramble for the sides of the ship. The men climb over the gunwale and stand upon the logs which are hung along the outside of the vessel, just above

*The whole ice field is broken into pieces from a few feet up to a hundred or more in diameter. These are called "pans." Icebergs of all sizes are commonly called "islands."

† Vernacular for seals.

the ice, looking more like crusaders, with their staves and red and yellow flags, than anything I could think of. Now we brush the sides of a larger pan than usual and the command to jump is given. Sixty men have to leave the vessel in less than one minute—for we are going at half speed—and most of them have to go over the one paw. Some few get their feet wet, one or two up to the waist, but there is no time to consider such trifles. Away the ship goes to drop another watch a mile or two farther on in order to cut off a section of the herd for ourselves, for while it is a fair field and no favor, if one vessel fences off an area by her men and flags, it is seldom invaded by the others. The men on the ice now scatter in progressively smaller groups until they are all in twos, covering every part of the field. As they go forward jumping from pan to pan, sometimes crossing four to five feet of clear water, they kill the seals, mostly the young white coats—the babies—as the old ones, knowing of old what the coming of man means, slide off into the water. A blow on top of the head with the heavy end of the gaff, then the seal is turned on its back. One stroke of the sharp knife through the skin and two inches of fat, and from the mouth to the tail, and the carcass is opened. A few more strokes, for these men become very dexterous with the knife—and the skin and fat is separated from the skeleton, and in less than five minutes from the time the blow is struck it is being dragged along at the end of the line to the next seal in sight, to repeat the operation. When five or six are thus secured they are dragged to the nearest flag, for by this time our ice flags are planted here and there throughout the field. If the seals are thick they will continue this until night comes, each man securing anywhere from seventy-five to three hundred, the latter being an exceptionally large number. In the meantime the vessel has gone out of sight, sending on the ice similar groups of men, but on in the day back she comes, picking up the men and seals here and there.

Throughout the day, from the barrel on the mast head, which was my favorite post of observation, one could see men and ships as far as the telescope would carry the sight. Thirteen vessels came into view this day, and upwards of three thousand men were all busily engaged in the work. By night the great white surface looks like an immense battlefield. Carcasses, human-like in the distance, patches and trails of blood everywhere. As darkness comes on the gory field is hid from our view and in place of this we see hundreds of lights blazing here and there all over the frozen ocean. They are the torches which have been placed by the flags, and thus the labor of gathering in the work of the day goes on ceaselessly. Though the darkness hides the bloody ice and snow from view, it does not clear the odor or darken the sight of blood from our deck. I was called out at 11 p.m. with the report that a man was dead in the forecastle and walked on seal skins six feet deep the whole length of the deck and found—syncope. The forecastle was stifling, so I had him brought outside, and the only place outside was upon the greasy, bloody, sealskins, and here the skins remain for twenty-four hours until they cool off when they are stowed below.

On this, our first day, we killed five thousand seals, and next day ten thousand, but the ice is looser this year than usual and the seals are

more scattered. A ship's company of two hundred and fifty men has in one day killed upwards of thirty thousand, and it took three days and nights to take them on board. In two of the days of our first week out the thirteen vessels within sight killed two hundred and fifty thousand young seals.

Killing seals on Sunday is prohibited by the laws of Newfoundland, and this regulation is well observed, but with the exception of two or three masters, they all take aboard any seals which they have panned. By Sunday night we have all our pans aboard, as have most of our companions, all the seals to be found having been killed. Stealing skins is a very common practice. It is a great temptation to see a large pile of them on the ice belonging to another, with not another vessel in sight. But our captain is one of the honest ones, and consequently, though we have killed over seventeen thousand, we have only fourteen thousand on board. Seventy-five flags are missing, which means seventy-five piles of skins.

Early Monday morning we head our bow again eastward to hunt for the Hoods which we left behind a week before. Full speed day and night, for we knew the rest of the fleet would be in search for them too.

HUNTING THE HOOD SEAL.—At eleven o'clock on Tuesday morning we sight them. Five other vessels have beaten us in, but they are in a skein, so we cut off the south end of it for ourselves and are soon at work. In fighting the Hood the mode of operation is quite changed. Here we are after the whole family, the young pup and the male and female, and in them we have game well worth our most careful consideration, for pater and mater will fight for their young, and well does the great sea lion know how to fight.

Our men are told off as before, but their appearance has changed. What a difference a gun in the hand makes in the expression of the face. Rifles have been served out to the best shots, and about one in five is thus armed and now they swarm over the sides of the ship looking like a gang of pirates. The gunners go ahead scattering over the field, and stalking the game is now in order. Dodging from hummock to hummock of ice, he gets as near as possible, then the deadly Martini-Henri, or Winchester speaks, a bullet into the neck, and two or three men rush up and kill the pup and female seal—"and kill dead" as they say, the male, for you may shoot him a dozen times and not kill him. And so the work continues all day long, and many are the tales of interesting fights and narrow escapes we hear on the return of the hunters at night.

For one like myself, not being financially interested as the others in the commercial success of the trip, the killing of the Harp seal was no pleasure, the cry and wail of the little pup was so akin to the human, that it seemed almost murder. Even from the ship's deck we could see many examples of parental love. An old seal seeing one of our men coming towards it, took with its right flippers (corresponding to the arm), the flippers of her baby and lifting it twice as though shaking hands, and with one long look into its face slid off into the water, only to protrude its head, showing a face with an almost human expression of anguish; every few moments. Another shoved her pup into the water and diving

herself kept the little one floating by poking it up with her nose, until the danger had passed, when she shoved it upon the ice again, and instinct is so strong that you may carry the young a mile or more from where you found it and in less than one hour the mother will find it. This is a favorite pastime of the men on Sunday. So among these I found pleasure and profit in playing with the young ones and observing their ways and brought quite a litter of them aboard the boat alive. But now we were among mightier game. One soon tired of shooting them and then for a few days I had all the excitement of sport I wished and attacking these immense seals is no mean sport, if one has only a gaff as the weapon of offense.

The Chief Engineer, as fond of the fight as myself, usually went with me, and when the ship was blocked we could wander over a large area. One day while hunting together with the captain in a field where they were few, we came across a family of them sleeping on the ice, for it was a bright day, the sun shining quite warmly. Getting up quite near to them I happily shot them with my camera, preliminary to the fight, after which I again snapped them at shorter range. As we came nearer, they awakened and growled out defiance. One attacked the female and after some little fight despatched it, while the remaining two together approached the great dog. His head was raised above four feet, the hood expanded to its full capacity, mouth open showing his great teeth, emitting an angry hissing noise. He awaited the attack. I struck him a ringing blow upon the side of the head and he darted forward but my companion, who had gone around back of him, struck him a smart blow on the tail and he swung round as on a pivot and jumped at him. Thus we fought for some time. Suddenly as the dog saw his opportunity, out went his great flipper with its long powerful claws and ripped a deep gash in my companions leg, and before he could recover, seized the gaff in his massive jaws and crushing and twisting it, threw it about fifty feet. With a quick turn of his head, leaving him defenseless, I gave him a smart blow upon the tail and he swung round to face me, but as he turned, I struck him a tremendous blow upon the throat. This for the moment released the air from the hood and another heavy blow upon the now unprotected head stunned him and he was soon despatched. He was nine feet in length and weighed upward of nine hundred pounds, the largest our Captain had ever seen. He now stands mounted in the show rooms of one of Toronto's leading furriers.

For a week we continued in this work; then for another week we cruised about, coming across small groups of seals here and there, which had become separated from the main body by wind and by wave. We threw overboard all the coal we could spare, and took from the men their bunks to make room for the seal skins. We loaded below and above deck with them, until our deck was within an inch of the water. Up to this time our ship has been as steady as in harbour, for the ice, which is death to some vessels, is the safest harbour in a storm to a sealing vessel. And now for home. Fortunately the ice was not so "hard a front" as the sun had been shining very effectually for some days, for a

On Sunday night we left the ice but found it too rough and went back into it for the night. On Monday we again attempted it and made Bonavista by nine o'clock p.m. A heavy fog coming on we did not ship anchor until five o'clock Tuesday afternoon, this gave me an opportunity of seeing something of the interior of Newfoundland, of which more latter on. Starting from Bonavista under a light wind, we got along very pleasantly until we came out into the broad Atlantic, with the full force of a strong east wind blowing upon us, and tossing, rolling, plunging and sliding, now upon the very crest of a wave, now our deck swept from end to end. We arrived the next morning before daybreak in St. John, gone just twenty-four days. Five of the fleet are in ahead of us. The Hope will never return, her remains lie scattered upon the rocks in the Gulf, and the Virginia Lake was caught near the north coast in an ice jam and did not return for two months.

These are but a few of the dangers the hardy sealers takes his chances on. Hardly any with a lengthened experience but have met with shipwreck, some upon the rocky shore, others in the ice field, as their vessel has been cut in two as by a pair of shears, two ice jams meeting and catching the vessel between them. Frequently the vessels are elevated clear above the water by these ice jams, held there for hours, sometimes weeks, then gently dropped into its home again.

In 1897 a most frightful disaster occurred in which forty lives were lost and many more have never recovered from the effects of it. The 21st March, 1897, was a beautiful clear day until noon when it began to look stormy. In the excitement of the chase Capt B——, of the G——, had sent out one hundred and fifty men early in the day, then steaming away out of sight kept all hands busy. At four o'clock in the afternoon the storm which had been brewing for some hours came upon them in full force, a blinding snow storm and intensely cold. Search was immediately begun for those out on the field, but not one was taken up that night. Next day one hundred were found alive, and the day after six were rescued, all being more or less frost bitten. Only twenty-four bodies were ever recovered, the remaining twenty-four finding graves in the mighty deep. One of the six became separated from some companions, falling into the water he remained there immersed to the neck for some time, he got out without assistance and was immediately taken with ice blindness, an extremely painful affliction. Groping his way along he came upon a pan of ice about fifty yards in length, and here he walked alone, backward and forward for thirty hours, when he was rescued. This disaster is well-termed frightful, because of its magnitude, but being lost in a fog in a storm, or by darkness, is an every day occurrence, and many are the groups of men we took abroad, they having lost sight of their vessel.

With these dangers ever confronting the hardy sealer, it should be a matter of the first consideration to those in authority that he should be kept in the best physical condition. A brief review of the accommodations for the crew and of the medical report will show to what extent this is being attended to.

For one week after leaving St. Johns the average space allowed each man, taking all the men's quarters, was fifty-five and one-quarter cubic

feet, and on the return trip, was forty-one and one half cubic feet. In one section there were seventy men who had only 29.7 cubic feet of space each, and this in a foul hold, underneath and at one end of which, was filled with seal skins and their oleaginous accompaniments. A hatchway three by four feet was generally kept open to emit the odors. The bunks, six by six feet and three feet from the deck, held six and sometimes seven men and their belongings. This, without any conveniences whatever Seal, pork, and duff with hard tack for food, and the constant exposure of the men, was not conducive to *good* health, and it is not a matter of surprise that among the two hundred and fourteen men on board two hundred and five required medical treatment and ninety surgical care.

As it is a common experience to get the feet wet, even becoming totally immersed, (one of the many experiences which I did not miss) our epidemic of La Grippe is accounted for. Ice blindness is another common and extremely painful affection. Absolute constipation of a week, and even two weeks' standing, and diarrhœa are among the common ailments. Of venereal diseases, only one came under my care. In all, there were twenty of the different diseases to deal with, pneumonia furnishing me with the one serious case. The surgical cases were mostly finger cuts, which in the past have furnished so many "seal fingers," a septic condition which has resulted almost invariably in the loss of the finger. Tubercular cases of course we do not meet with, they cannot stand it. But one can very reasonably attribute to the constant exposure and total lack of hygienic surroundings accompanying this avocation, the inroad pulmonary tuberculosis is making among these hardy people, as well as among the inhabitants of presumably more healthy lands. To those of us taught to think of Newfoundland as the land of fog, codfish and "French shore questio." it was a delightful surprise. Montreal with its temperature below zero and many feet of snow gave way on our first day there to barely enough snow to run a sleigh, and smart walking made an overcoat feel uncomfortably warm. The winters are milder than in Ontario, and for June, July, August and September the temperature ranges about 85°, almost chilly when we think of our .00 summer. In our railroad trip across to St. Johns we were impressed with the sublime beauty of its scenery. Newfoundland has been well named the "Norway of America." Its deep fiords, which indent the shores everywhere, guarded by lofty cliffs, are on a much grander scale than the famous Norwegian fiords and are not less magnificent.

To the lover of sport Newfoundland presents attractions which are probably unequalled anywhere. Its countless lakes abound with trout of the finest description, and are the abodes of wild goose, the wild duck, and other fresh water fowl. The grouse, the plover, the curlew and the snipe, are to be found all over the island. Above all, the noble caribou or deer, in vast herds traverse the island in periodical migrations from south to north, and furnish the highest prizes for the sportsman.

That important consideration, accommodation, is luxuriously provided for, the railroad equipment being equal to Canada's best, and the fine fleet of steamers running up to Labrador and around the island is as comfortably appointed as our best lake steamers.

Our whole party were in "lucky" ships, and all returned within a few days of each other with full loads, so we at once escape being jinkers* and "lousy," and after enjoying the hospitality of our medical and other friends for a few days in St. Johns, returned to Toronto after an absence of six weeks, bringing many interesting remembrances of our trip, all with experiences, one with notes in abundance for a good story, two of us with skins for mounting, and myself with two live baby seals.

SELECTED ARTICLES.

AEROPHAGY.

BY H. D. ROLLESTON, M.A., M.D., F.R.C.P.,

Physician and Lecturer in Pathology, St. George's Hospital; Senior Physician to Out-patients, Victoria Hospital for Children.

Aërophagy, or the swallowing of air, has been carefully studied by Lyonnet and Vincens ("Lyon Médical," February 10, 1901) in eight cases, three of which were males. The symptoms are swelling after food, loss of appetite, desire to sleep, though there is often some insomnia, and frequent eructations, which are usually noisy, vomiting is only occasionally met with. Gastric symptoms may accompany aërophagy, and appear to be due to it, and not to be merely associated phenomena, since they usually develop after aërophagy is well established. The symptoms described by Bouveret as neurasthenic gastro-intestinal atony may be present. Constipation is usually noticed, and may give rise to mucous colitis, while enteroptosis and floating kidney may co-exist. From incessant aërophagy there may be considerable tympanites. Occasionally the patient wastes and becomes cachectic, so that new growth is suspected. The eructations are usually noisy, but may be quiet. Before these eructations there are rapid deglutition movements; if these are overlooked, an erroneous diagnosis of flatulent dyspepsia may be arrived at. These eructations may occur first thing in the morning, before any food has been taken.

Aërophagy usually occurs in hysterical females, and may begin suddenly from shock or emotional disturbance. Being a neurotic manifestation, the duration is variable. It may be cured by very simple means; on the other hand, relief may be only temporary, and frequent relapses are very prone to supervene.

Aërophagy may be voluntary—a physiological curiosity—or involuntary and pathological. There is then clonic spasm of the pharynx. Treatment falls under three heads: (1) The general treatment of hysteria by moral suasion, change of scene, tonics, etc.; (2) counteracting the pharyngeal spasm by keeping the mouth widely open, painting the pharynx with cocaine, and the application of blisters to the front of the larynx; bromides, valerian, and belladonna do good, and marvellous results have in some instances followed "suggestion"; (3) for the added

* A term applied to all who come in without seals. There are "jinkers" every year at this work.

* Naturally two months of such accommodations would have its effect.

dyspeptic symptoms mineral waters and washing out the stomach do little or no good. The muscular tone of the stomach requires tightening up, and for this purpose strychnine and ergot are recommended. Food should be given in a somewhat concentrated form, so as to avoid the bad and mechanical effects of bulky food.—*The Practitioner*.

THE IMPORTANCE OF THE EARLY RECOGNITION OF EAR TROUBLE IN CHILDREN.

By MACLEOD YEARSLEY, F.R.C.S., Surgeon to the Royal Ear Hospital, etc.

The discovery of adenoids by Meyer, of Copenhagen, in 1868 gave a certain impetus to the better recognition of the importance of the study of otology, especially in children, as a part of the curriculum of the medical student, and since that time the efficiency of the general practitioner in both diagnosis and treatment has slowly but surely improved.

In a large majority of cases partial or total loss of hearing in a child is not noticed by a doctor on first seeing the patient, and, save in a few intelligent instances, is not accepted or believed by the parents. This is less often the case in total deafness, but in instances of partial damage only the condition is often unnoted or neglected until the child is more advanced in years and is at least over the age of four. The consequence is that much very valuable time is lost and treatment has little or no effect.

Let us take an instance—a child is the subject of adenoids and gets attacks of deafness with every cold, from which it recovers with diminishing frequency, until it is in a condition of permanent deafness of sufficient severity to seriously handicap it in its future struggle for existence. This condition is directly due to the adenoids, and if recognized earlier and properly treated, would have resulted in perfect recovery. Having progressed to the stage just described, however, the prognosis as to the treatment is far less hopeful. One sees, unfortunately, cases of this class with a too great frequency, and the appearance of the membrana tympani is sufficiently significant to one who has the opportunity of frequently observing such cases. Whenever I find the drum exhibiting a loss of transparency and a dullness which is best likened to ground glass, I always find without exception that that case has gone too far to obtain much benefit from treatment as regards recovery or improvement, and one can only safely promise that the removal of the adenoids will improve general health and act probably as a stay to further progress of the deafness.

Even in these days of improved medical education and perfected methods of diagnosis there are still practitioners who have sufficient temerity to assure parents that their children will "outgrow" deafness or discharge from the ears. The latter is, of course, a constant menace to life, but it is almost equally criminal to neglect the former since the sense of hearing is to some extent as necessary to the taking of one's place in the community as that of sight.

It follows therefore that if a child is deficient in hearing, the sooner that fact is ascertained beyond a doubt the better. Steps can then be taken to ascertain the cause, amount and probable curability of the trouble and, if incurable, to at once place the patient in the best position for acquiring education in other ways than through the ears.

It is not always easy to determine satisfactorily the presence or absence of deafness in a young child, simple as it may seem to those who are unaccustomed to dealing daily with deafness.

A child may be slow in learning to talk but this is by no means always an indication of defective hearing. Certain mental defects, too, may simulate deafness and must be excluded. Should a child, otherwise normal, pass its first two years of life without acquiring one or two simple words, especially the "dada", and "mamma" with which all babies quickly learn to greet their parents, it is most probable the subject of defective hearing. The general practitioner who is in the habit of seeing the child will probably have his attention frequently aroused at an earlier period, and should this be the case, he should at once take measures to ascertain the accuracy of his suspicions. In any case of doubt I think it is best to examine the child under chloroform rather than risk possible future deafness.

Much has been written on the dangers of discharge from the ear in children, and even now there are individuals who allow such cases to pass from bad to worse without making any real effort to save them. The significance of earache in children is of equal importance and receives almost equal neglect. So many men seem to lose sight of the fact that the ear may be the *pons et origo mali* in many a puzzling febrile attack.

Pain in the ear may be described roughly as of two kinds—inflammatory and non-inflammatory. It is the former that is most common in children, indeed, the non-inflammatory form is, in my experience, rare, and those who assert that the majority of cases of earache in children are "neuralgic" in character fall in grave error. Small babies cannot make known the seat of their pain and can only draw attention to it by screaming lustily, a means at which they are singularly proficient. When a child is in pain it requires careful observation to ascertain the spot at which that pain arises. The raising of the hand to the ear, or the refusal to lie upon that organ, or the tenderness of the ear to touch in washing, etc., may afford an indication, but such future trouble and chagrin would often be saved if the ears were examined in every case of febrile attacks, apparent pain, or even fretfulness. Pain in the ear varies much in intensity, and while in one case a child may be thrown into proxysms of screaming and possibly almost into convulsions, in another there may be only a condition of fretfulness and whimpering.

A "cold in the head" in a baby nearly always affects the lymphoid tissue in the vault of the naso-pharynx. This fact affords an easy explanation of the frequency of inflammations of the middle ear in early life. The usual results of such inflammations and their simulation of meningitis, when they have not given rise to that complication, is sufficiently well known to all practitioners and there is no necessity for me to dwell upon it. The apparent attack of acute meningitis, pneumonia,

typhoid fever or other serious disease which can be cleared up by a timely incision in the drum membrane, bulging from retained inflammatory products, must be familiar to every physician who has much to do with children.

The importance to the general practitioner of the early recognition of ear-pain in children cannot therefore be over-estimated; he is the first to see the case and by excluding the ear he will greatly simplify this method of diagnosis, while if he at once localizes the seat of the pain in that organ he will have the satisfaction of saving the patient much possible future suffering, himself much annoyance, and he may—possibly—earn the gratitude of the parents.

The simulation of or connection with other regional diseases was strikingly shown by Hartmann in 1899.* He called attention in an article entitled "On the Intestinal Disturbances produced by Otitis Media of Infants" to the fact that loss of weight and elevation of temperature should always demand an examination of the ears, when it would often be found that the tympanic cavity contained pus, and relief would follow its evacuation. That author regards intestinal disturbance in infants suffering from otitis media as the result of the reabsorption of the toxic poisons from the exudate in the tympanic cavity, rather than that the ear trouble resulted from the infection entering the Eustachian tube during the act of vomiting.

It is astonishing how some men neglect their opportunities; one would think that in cases where the cause of a condition could not be ascertained with ease the practitioner would not rest until every organ had been investigated for a possible explanation, for his own reputation's sake if for no other reason. Yet, while engaged on this very article, I saw a case of a child of twelve, the subject of deafness due to adenoids and tonsils and in whom the tonsils nearly met across the fauces and were frequently the seat of acute inflammations, whose parents had been told by three general practitioners, practising in two of England's largest towns, that nothing need be done as she would "grow out of it."—*Pediatrics*.

* *Archives of Otolaryngology*, vol. xxviii, Nos. 2 and 3, 1899.

WHAT IS A COLD ?

There is something very mysterious about the condition which is commonly called a "cold." It is popularly ascribed to a chill, but a brief consideration suffices to establish the fact that chill can only be one, and possibly not the most important, factor in its production, since it is only under special circumstances that exposure is followed by the characteristic symptoms. The view that the condition of "cold" is one of répletion has much in its favour. It is when one is not feeling "up to the mark" that cold is usually caught, that is to say, when the eliminatory functions of the body are not doing their work properly, thus throwing the machinery out of gear. No one takes cold when in a vigorous state of health, a cold is the result of insufficient exercise, the breathing of foul air, an excessive or an inadequate supply of food, or other violation of the elementary laws of health. Overfeeding and the consumption of alcoholic stimulants appear to be particularly prejudicial in this respect, especially if associated with a lack of exercise in the open air. On the whole, an underfed man is in a better physiological state than one whose organs and tissues are chronically burdened with an excess of nourishment not thoroughly assimilated. A starving man, it has been said, never takes cold, though this may be an euphemism, merely meaning that the vacuity of his stomach dominates his sensations to the exclusion of minor inconveniences. Hungry hounds hunt the best, and, within certain limits, underfed tissues are physiologically more active than tissues afflicted with plethora, and when the bodily functions are actually or potentially active the system is not prone to take cold. It is suggested that the nasal catarrh represents an endeavour on the part of the organism to throw off uneliminated impurities through the Schneiderian membrane *vice* the skin, and if so it must be regarded as a very efficient filter in view of the copiousness of its excretion. The important point to bear in mind is that cold is disease essentially of internal origin, due to defective purification of the tissues, the effects whereof are brought to a crisis by a fortuitous chill. The treatment, therefore, should be as far as possible prophylactic. To live in the open air as much as possible, or at any rate to breathe as much fresh air as possible; to maintain the skin in a functionally active condition by frequent baths, in the event of a hitch, resort to the more drastic cutaneous purgation induced by a Turkish bath. Combined with this, and in opposition to the popular adage, the diet during the acute stage of an attack should be restricted in quantity and simple in kind.—*Medical Press and Circular.*

SOCIETY REPORTS.

ONTARIO MEDICAL ASSOCIATION.

The twenty-first annual meeting of the Ontario Medical Association was held in the Educational Department, Toronto, on the 19th and 20th of June, 1901, the President Dr. Angus Mackinnon, of Guelph, in the chair. The secretary read the minutes of the last session of last year which were adopted.

The report of the Committee on Papers was presented by Dr. Macbell of Toronto, and the report of the Committee on Arrangements by Dr. Bruce L. Riordon.

THREE RECENT GALL-STONE CASES.

Dr Wm. Oldright, Toronto, said these cases had occurred recently in his practice. They present features of interest to the profession. The first case occurred in a woman about fifty-five years of age. He was rather surprised to be called upon to see her in a hurry, to find symptoms of gall-stone obstruction. The late Dr. Little had seen the patient and had endeavored to obtain purgation without effect. Powerful cathartics were unavailing. About nine months previously she had a similar attack, but Dr. Oldright had heard nothing about it until this attack. The symptoms were: somewhat elevated temperature (about 100 to 101) constant vomiting, obstruction, and, of course, intense pain. He supplemented Dr. Little's catharsis, but without any effect. On examination he could map out a distinct tumor, and told her that she had a distended gall bladder; advised her to go into the hospital, which she did that night. She was operated on in the afternoon, and some gall-stones removed and he endeavored to establish patency of the duct. He could feel no stones left behind, but there was some stenosis of the duct. There was a great deal of inflammatory action in this case. The gall bladder was stitched into the abdominal wall and drainage established in the usual method; bile flowed freely. The patient made a good recovery. The second case was one Dr. Oldright saw in consultation with Dr. McLean, of Woodbridge. She was sixty-five years old. The prognosis was certainly death without operation, and provided there was no malignant trouble she would probably recover. In this case one could imagine the difficulty there would have been had it been his first case of operation, as he could not locate the gall bladder. He came to the conclusion that it was not a case for further interference. Within twenty-four hours she succumbed to the shock and probably to some hemorrhage. There was no doubt after passing the finger in that it was malignant. If this woman had been operated on some years before, Dr. Oldright thought that malignancy would not have occurred and her life would have been

saved. The third case occurred in a woman forty years of age. Upon her the surgeon operated last February. Here was a case in which there had been gall-stone symptoms, obstruction, for about eighteen months. She consented to an operation. The obstruction was in the cystic duct. He opened the gall bladder and took out the stones which he exhibited to his audience. The operation occupied about forty minutes. The patient made an uneventful recovery, and left the hospital thirteen days after.

Dr. Garrett, of Kingston, said that operative interference in gall-bladder surgery had only recently been brought into prominence. Early diagnosis is very important. We should operate at once when we make a diagnosis. He referred to a case which had been diagnosed as catarrh of the stomach upon which he had operated and had extracted 170 stones from the gall-bladder.

Dr. T. Shaw Webster, Toronto, asked Dr. Oldright if there are not some cases where it would be better to wait for a little while, in cases where there is a strong probability that the condition will disappear in a short time.

Dr. Oldright in reply: As soon as we are satisfied of gall-stone obstruction, as soon as acute symptoms have subsided, we should operate, and not allow repeated attacks to go on until malignant disease is established.

EXCISION OF UPPER JAW FOR SARCOMA—WITH EXHIBITION OF PATIENT AND SPECIMEN.

Dr. Herbert A. Bruce, Toronto, presented this paper, whilst Dr. G. Silverthorn exhibited the specimen. Dr. Bruce also presented the patient, a woman thirty-four years of age, from whom he had removed the upper jaw for sarcoma. The patient had been sent to him by Dr. Bowles, of Woodhill. The history of the patient is, briefly, as follows: During the last week of January of this year she felt, for the first time, a slight swelling over the alveolus of the left jaw, which she thought to be a gum-boil. She consulted Dr. Bowles at the end of March, and Dr. Bruce saw her about the middle of April—that is less than three months after the first symptoms. Dr. Bruce operated upon her on the 29th of April, exactly three months after she had the first symptom. On examination he found a very hard swelling just behind the second bicuspid tooth and extending backwards to the full extent of the jaw. Internally it had not extended to the middle line, and bulged externally to the extent of half an inch beyond what would be the line of the teeth. It extended backward toward the antrum, but the latter did not seem to be implicated externally. The growth in the roof of the mouth was covered by mucous membrane. On looking into the nose a polypoid mass was seen, and the patient had some difficulty in breathing through the left nostril. The cheek on the affected side was slightly more prominent, and it moved freely over the growth. No prominence of the eye on the affected side was to be made out. A small portion of the growth was removed under cocaine, and Dr. Silverthorne reported to Dr. Bruce that it was sarcoma. The patient left the hospital on the eighteenth of May and made an uninterrupted recovery.

Dr. Silverthorne presented the specimen to the members of the Association. It was the size of a large sized orange, containing spindle cells with a cartilaginous basis.

Dr. Bruce stated that the history of the patient showed that a polypus had been removed about eight years ago, and he thought that it must have been a simple polypus.

ECTOPIC GESTATION.

Dr. R. W. Garrett, Kingston, extended his thanks to the Committee on Papers for placing under his care a subject of such great magnitude. The subject is one of vital importance to every practitioner, for at any time he might be called upon to differentiate the condition from others with which it might be confounded. The responsibility of a life was in his hands and demanded accurate diagnosis, medical acumen and judgment and ability to conduct the case to a favorable termination. He entered at considerable length as to the causation and earlier changes consequent upon ectopic gestation, and stated that every physician is expected to make a correct diagnosis of tubal pregnancy on the occurrence of rupture; and in a fairly large proportion of cases, to make a correct diagnosis of tubal pregnancy on the occurrence of rupture; and in a fairly large proportion of cases, to make a diagnosis before the occurrence of rupture. Theoretically, the arrest of a fructified ovum may occur first in the ovary, second, in the abdominal cavity between the ovary and tube, third, within the tube, and fourth, between the tube and the uterus. He would direct the attention of his audience to but one kind only,; arrest within the tube, or tubal pregnancy, as all other varieties are but merely developments of this kind, owing to secondary invasion of the Fallopian tube. These he divided into three groups: First, tubo-abdominal, or simply abdominal pregnancy, in which there is as secondary invasion of the abdomen; second, tubo-ligamentary in which there is a secondary invasion of the broad ligament and subperitoneal tissues, and, third, that sub-division of the tubo-uterine in which there is rupture into or secondary invasion of the uterus. At considerable length he discussed the etiology, then the symptoms, pointing out the difficulties that lie in the road to making a diagnosis owing to the absence of many, if not all, of the classical symptoms generally enumerated. Having dealt in a masterly manner with these he recited a very interesting case in illustration of his contention of the difficulties of diagnosis.

Dr. J. F. W. Ross followed Dr. Garrett in the discussion regarding the diagnosis as the most important point of all, and especially the diagnosis before rupture. He thought that we ought to be able to diagnose these cases before rupture had taken place. What are the symptoms? Generally four or five symptoms. He referred to the pain that is indefinite, not severe, not acute, but a feeling as if something were wrong. He referred to several cases recently seen in practice.

Dr. Powell referred to a case where Dr. Ross had diagnosed the condition before rupture had occurred

Dr. Oldright mentioned a double rupture of both tubes.

Dr. A. A. Macdonald complimented Dr. Garrett on the careful manner in which he entered into his subject, and thought it was one of the greatest importance to the general practitioner. He remembers the time when it was stated that no one could make the diagnosis before rupture. He referred to a case which came into Bellevue Hospital, in Toronto, comparatively recently—a case of twins, in which one child was delivered in the natural way, and the other child ectopic.

Dr. T. S. Webster said that the subject was one that he had taken a great deal of interest in, and has had to deal with four of these cases.

Dr. Prevost, Ottawa, showed a specimen and said that sometimes, in spite of the most accurate diagnosis, we make mistakes. He described the case, the specimen of which he presented.

Dr. A. F. McKenzie, Monkton, referred to a case seen in his practice, which went on to full term and was delivered of a large child and no trouble. He further spoke of the difficulty in making the diagnosis in these cases.

Dr. Machell thinks the interest centres in the diagnosis.

Dr. Mackinnon, the President, stated that he had not had much experience with these cases before rupture, but had had a little experience after rupture. He thought frequently there might be danger in making a mistake. He also cited a case occurring in a young married woman with a little child five or six years old.

Dr. Garrett closed the discussion, and thanked the members for their generous treatment of his paper. He considered that discussions of this character were of the greatest moment. Rupture is generally about the third month, and interstitial pregnancy can go on to a much longer term than tubal pregnancy, and in this form we generally have external rupture.

FIRST DAY—AFTERNOON SESSION.

PRESIDENT'S ADDRESS.

Dr. Mackinnon delivered a very able address on the opening of the afternoon session. He considered that it was a great honor to be elected president of this, the largest and most influential medical association in the Dominion of Canada. Having referred to the success of the meeting so far, he proceeded to contrast the state of medicine at the beginning of the last century with that of the present, and compared the vast advantages we to-day possess over those of one hundred years ago. Anesthesia, antiseptics, asepsis, vaccination, the anti-toxin treatment for diphtheria, the discovery of bacillus of tuberculosis were mentioned, and he looked for the dawn in no far-distant day, of that grand and glorious day when we can say to the world that tuberculosis and cancer can both be cured. He deplored the growth in the employment of new proprietary remedies, and thought that harm was being done to the medical profession by manufacturing firms making up pills for neuralgia, for malaria, etc. He considered that the literature and drugs sent out to medical men by these manufacturing houses had become an intolerable nuisance. The electric

belt man, the Christian Scientist, the advertising cancer-curer, the osteopath, and many other such like fakes which hang on to the skirts of medicine, he scored most unmercifully, and regretted that the public press, both secular and religious, opened their columns freely to these fulsome, untruthful, and sometimes immoral advertisements, because they pay well. There was great danger to the public in permitting Christian Scientists, the "pray-for-hire-healers" and the "Dowieites," impudently undertaking to cure infectious diseases, such as diphtheria scarlet fever and smallpox—diseases which they are unable to recognize; and he thinks that we have come to a point where toleration and forbearance become criminal. The 2,500 medical men in Ontario should have influence enough to obtain from the Legislature an amendment to the Medical Act that will put an end to this trifling with human life. He directed attention to the delay that occurs in securing admission to the asylums for people, the subjects of acute mania, and thought it was high time the necessary steps in this department in the practice of medicine should be simplified.

PULMONARY TUBERCULOSIS—ITS TREATMENT IN SPECIAL SANATORIA.

Dr. J. H. Elliott, Medical Superintendent of the Sanatorium at Gravenhurst, read this paper. Speaking generally, it may be said that from fifty to seventy per cent. of the incipient cases are restored to health, while from all classes from fifteen to thirty per cent. are reported cured or arrested; in sixty to seventy per cent. a marked improvement. The first thing noticeable after entering the sanatorium, in most cases, is an improved appetite, a gradual gain in weight, and a decline in evening temperature. With this improvement night sweats disappear without medication, the cough and expectoration noticeably lessen, and the patient sleeps until morning. The principles generally adopted are: First, a continual life in the open air, with rest or exercise as indicated; second, a liberal, suitable diet; third, medicinal treatment according to indications, and to a great extent symptomatic; fourth, hydro-therapy; fifth, a strict medical supervision of the patient's daily life. Speaking of the "rest-cure" in febrile cases, the object is to reduce muscular exertion to the least point consistent with the ingestion and proper assimilation of a good diet. Referring to medicinal treatment; with a hygienic life, pure medicines are required. The various tuberculins and serums are being used both in America and Europe, with the prospects of yet securing a specific for those cases where mixed infection is absent. Constant supervision of the patient is the most important point in which the sanatorium treatment must necessarily differ from that adopted by the general practitioner. Living, as he does, with his patients, adopting their mode of life, having his meals in common with them, the physician is enabled to individualize the treatment, and though on broad lines the patients all receive the same treatment, each one has to be studied in detail, and the indications met accordingly. The chief point, under all circumstances, is that the patients, wherever they may be, live prudently, and be under the care of an intelligent and firm physician.

Dr. Price-Brown referred to the advisability of sending patients for sanatorial treatment, and stated that we have for every disease places to send our patients—hospitals throughout the length and breadth of the land—except for tuberculosis. Having recently been at Asheville, N.C., he described the treatment which he had seen carried on in that institution.

Dr. John Hunter, Toronto, deprecated sending these patients long distances away from their homes, which was formerly the custom, but is not so now. He hoped to see the time when there would be a large number of these institutions established in this country.

Dr. Elliott, in reply, emphasized the point that there should be no exercise when the evening temperature is above ninety-nine degrees; it may be permitted in the morning if it reaches one hundred or one hundred and a half, but not in the evening.

VACCINAL PROTECTION AGAINST SMALLPOX.

Dr. P. H. Bryce, Toronto, the Secretary of the Provincial Board of Health, presented this paper. In the introduction to his paper he expressed the belief that although the practice of vaccination against smallpox has existed for a century, there never was a time since it was formally accepted by the profession, when there was so much expressed scepticism as there was to-day on the part of the laity with regard to its protective qualities, and never a time when the profession has been so indifferent as to impressing the necessity of its proper performance upon the public. In Ontario, between 1898 and 1899, there were but twenty-two recorded deaths from the disease. He made special reference to the art of vaccination and the quality of the lymph, and thought five separate insertions should be made in each case. The quality of the lymph was very important. He thought that a medical man going out from college did not receive sufficient practical instruction on this most important subject.

Mr. J. H. Cameron discussed Dr. Bryce's paper and stated, as a matter of fact, he had no hesitation whatever in seeing a case of smallpox himself, nor would he object to any member of his family seeing it, if he knew that they had sufficient protection through vaccination. He warned the profession against laxity in dealing with this most important subject.

Dr. Harrison, Selkirk, stated that he had had considerable experience with smallpox, and on account of that experience he entered a vigorous protest against the prevailing carelessness in insisting on vaccination and revaccination in the laity as well as the profession.

Dr. John Hunter, stated that in many cases he had failed to secure successful vaccination.

Dr. Geikie considered that Jenner's discovery was one of the greatest and grandest achievements in medicine.

Dr. Price-Brown referred to a case in the Toronto General Hospital in the year 1866.

Dr. Rudolf asked Dr. Bryce whether the instructions given along with lymph supplied by different firms were not partially to blame for the insufficient vaccination among the profession. He considered that no one should be guided by those instructions.

Dr. Bryce, in reply, thanked Mr. Cameron for taking up the discussion. He considered that the profession was lamentably ignorant of the nature of protection and protective qualities of vaccination itself.

Dr. D. J. Gibb Wishart suggested that a resolution be passed by the Association expressing its approval of from three to five insertions, and advising manufacturers interested in the matter.

Dr. Thistle thought that they should not stipulate the number of marks, that it would not be wise, as many successful vaccinations had been obtained from one mark.

Dr Stewart of the Ontario Vaccine Farm, Palmerston, thought four or five marks better, so situated that there would be no coalescence.

Dr. McPhedran did not wonder that the younger members of the profession were weak as regards the diagnosis of smallpox when facilities for instruction in clinical work was absolutely nil, he had repeatedly asked to be permitted to take a class to the Infectious Diseases Hospital, but had always been denied.

Dr. Noble, Philadelphia, thought as a surgeon that something else might have been said about the care of the vaccination wounds. The wounds should be protected, so that there would be no chance of infection.

DISCUSSION ON EMPYEMA.

Medical Aspect.—This subject was introduced in a well prepared paper by Dr. Ferguson, London, who said that the treatment of this condition was essentially surgical, and that the medical aspects of the disease were limited to a consideration of its pathogenesis and prophylaxis. He considered that the conditions of non-purulent or primary effusion were indispensable to an understanding of the pathogenesis of empyema. He gave a description of the pleura and discussed the bacteriological aspect purulent pleurisy, which he divided into four classes: First, those due to pneumococci; second, those due to streptococci (and staphylococci); third, those due to the bacilli of tuberculosis and fourth, those caused saprogenic organisms. In nine cases, extending over eleven years in his practice, three were diagnosed tubercular, three meta-pneumonic, two due to the streptococci, and one undetermined. The prognosis varies with the micro-organism present, the pneumococci being the most benign. It is the only variety of purulent empyema that may possibly yield to treatment by mere aspiration especially in children. Tubercular empyema is usually mixed infection. The prognosis here will depend upon the general condition of the patient, and the character of the mixed infection. We therefore see the importance of a bacteriological examination as in any other debilitating disease; supporting and tonic treatment is essential. With the advent of pus, surgical means must be adopted.

Surgical Aspect.—Introduced by Dr. J. L. Turnbull, Goderich. When the presence of pus is determined it should be evacuated at once, as there is always the danger of abscess bursting into or through the chest wall, or even through the diaphragm and producing peritonitis. Aspiration need not be described; remember not to remove the fluid too rapidly. In this, as in an ordinary abscess, it is not necessary to open at the most

dependent point. The preferable way, and the one which Dr. Turnbull always uses when a diagnosis of pus is made, is to remove a portion of a rib; an inch and a half may be cut out, preferably with the saw, under strict antiseptic precautions. Dr. Turnbull advises washing out every day when pus is offensive, and the drainage tube gradually shortened until it can be removed altogether. Where a cavity and sinus remains after this operation, the sinus may become closed and a second empyema established. This requires an Estlander's operation, and one of the best ways is to carefully locate size and boundaries of cavity with a probe, and after dissecting up a flap of skin, be sure to remove enough bone. The hard fibrous tissue beneath the ribs, which is always present in quantity there, must be thoroughly removed. Dr. Turnbull advises mopping out with pure carbolic acid, then with alcohol to prevent poisoning, and then with sterilized water, the part being carefully dried. He puts a drainage tube in the most dependent part.

Dr. J. C. Mitchell considered that these cases should be dealt with purely on the same principles as an ordinary abscess. He has seen more cases in adults than in children. He considers that a good many of them are tubercular.

Dr. Powell took exception to Dr. Mitchell styling empyema as being only an ordinary abscess. He considered that it was something more, because lung was pressing on one side of it. He exhibited an instrument which he used in the operation.

Dr. John Hunter mentioned a case where air entered the cellular tissue in the skin, and universal empyema set up.

Dr. Primrose considered it an important point to know whether the case was one of mixed infection. He does not think that we have taken all the advantage we might do of the researches that are made in the bacteriological laboratory.

Dr. Thistle said that one point had not been referred to which he considered of first importance in successful treatment—the time at which operation should take place. That is the crucial point in procuring success in these cases. The earlier the operation is done the speedier the cure, and in many of the cases which run into chronic empyemata, this result was due to the lateness of the operation.

Dr. McKeown said there were three points of importance to his mind—recognized that pus is present, that we want to get at it, and that we want to get the cavity closed up.

Dr. McPhedran considered that these cases should be diagnosed very early, and are easily treated as a rule. One should be on his guard in a case of pneumonia when the temperature falls about the eighth day to near the normal; if it commenced to rise again it is suspicious of empyema.

Dr. Freel, Stouffville, considered that it was better to resect the rib with proper dressing and tube, than to aspirate.

Dr. Rudolf—So far it seems to be the opinion of this meeting that where pus is discovered in the plural cavity it should be removed by operation. He thinks there is one exception to that; that is, where an empyema exists along with tuberculosis of the lungs. In this condition

where pus is found, it should not be at once removed without careful consideration.

Dr. Turnbull, in reply, considered that it was best that the rib should be removed in every case. He does not think it necessary to wash out the cavity in every case; only where the discharge is offensive. The tube should be long enough to go into the cavity.

Dr. Ferguson, in reply—early diagnosis, with the aid of the bacteriologist, will add much to the after treatment.

FIRST DAY, EVENING SESSION.

OPEN-AIR TREATMENT OF DISEASE.

By Dr. George H. Carveth, Toronto, who described his method of treating different forms of disease, first, in the house with wide-open windows; second, in beds on the verandah; third, in beds under tents on the lawn. At first he experienced some difficulty in getting his patients to consent to be treated in this manner; but after they become habituated to life in the open air, they returned indoors reluctantly. Some of the cases that he has treated in this way are iritis, cases of fracture, cases of radical cure of hernia, rheumatoid arthritis, tubercular disease of the spine, typhoid fever, and a case of hysterectomy. His address was illustrated by lantern slide projections on the canvas, which proved very interesting to the members of the Association.

Dr. P. H. Bryce spoke of the value of treating smallpox patients in tents. The tents should be double roofed, and double floored, and double walled, and each tent provided with a stove. The patients lived in these when the thermometer was 20 degrees below zero, being quite comfortable. Nobody died, although many were seriously sick.

Dr. Freely, Stouffville, recited the history of the case of a clergyman, the victim of tuberculosis, who lived in his tent all winter when the thermometer was 20 degrees below zero, and the wind blowing a perfect gale, and he was very comfortable. In a few months' time he ceased sweating, and gained very rapidly in weight, to such an extent that delivering a sermon would not throw him into a perspiration as it always did before he took up his tent-life on his lawn.

Dr. J. H. Elliott, Gravenhurst, saw no reason why out-door life should not be employed in the treatment of other diseases as well as tuberculosis. It is not specific, and the only reason it is used is to strengthen the organism to resist disease. It is practically returning to primitive life, and it is so comfortable and pleasant that you find it very difficult to get patients to return to the house.

Dr. John Hunter referred to the Orphans' Home, Toronto, where they keep about two hundred children. These are admitted about four years of age and they are kept there until they are fourteen. Their mortality in that institution is about three in one thousand. They are practically kept out of doors all the time, and comparisons between the children of the Orphans' Home and the children of the well-to-do people of the city are greatly in the formers' favor.

Dr. Webster said the trouble is not so much to get the patients to sleep out of doors as it is to get them to return to the house when they have once been out of doors.

Dr. G. S. Ryerson, speaking of his visit to South Africa, said that at Bloemfontein the typhoid fever patients did particularly well in tents. The mortality was much larger in buildings improvised and used as hospitals. He considered that it was well to have the roof of the tent of a material of some dark color, such as green or brown, because the patient, lying on his back, begins to complain of the color of the roof.

ON THE USE OF NITROUS OXIDE AND ETHER AS AN ANESTHETIC.

This paper was prepared and read by Dr. L. Coyteux Prevost, of Ottawa, and it proved to be one highly interesting, carefully prepared, and ably delivered. He considers that a good and satisfactory anesthetic must possess the following qualities: First, offer the least possible harm to the patient; second, be rapid; third, complete; fourth, permanent; fifth, followed by as few disagreeable post-operative effects as possible. He then proceeded to relate the results of his personal experience during the last two years at the hospital in Ottawa, as well as in his private practice; Dr. Carroll, of Ottawa was his assistant in this work. The agent they employ is ether, with which they lately have associated nitrous oxide, which is given at the beginning of anesthesia by the means of Clover's inhaler. He considers this method as absolutely ideal, as much for the rapidity with which the patient becomes anesthetized as from all unpleasant sensations during the process of anesthetization and the diminution of after symptoms so frequent after operations. The apparatus which they have been using for the nitrous oxide and ether is Hewitt's inhaler, which is a modification of a Clover inhaler, with the rubber bag replaced by a large bag with valvular attachments. Within the past two years they have used this method almost exclusively, and the results are as follows: Anesthesia in one minute, twenty-four times out of three hundred and seven cases recorded; in one and a half minutes, fifty-five times; in two minutes, ninety-four times; in two and a half minutes, forty-seven times; in three minutes forty-four times; in three and a half minutes, nine times; in four minutes, nineteen times; in five minutes, fourteen times. Dr. Prevost then entered into his observations with regard to the effect of the anesthetics upon the kidneys, and stated that out of 434 observations albumen was found twenty-six times. He drew attention to the fact that post-operative vomiting was very rare. Dr. Prevost was the first surgeon in Canada to employ intraspinal cocainization. He believes that so long as the old and well-tried anesthetic agents, handled by competent men, continue to give good satisfaction that it will not be wise to abandon them until medullary narcosis has been clearly demonstrated.

THE COMPLICATIONS AND DEGENERATIONS OF FIBROID TUMORS OF THE UTERUS, WITH REFERENCE TO THE TREATMENT OF THESE GROWTHS.

Dr. Chas. T. Noble, Philadelphia, delivered an able and exhaustive paper under the above heading, an abstract of which will be published in a subsequent issue.

Drs. J. F. W. Ross, N. A. Powell, Mackinnon, and Clouse discussed the paper, to which Dr. Noble replied.

SECOND DAY—MORNING SESSION

THE RELATIONS OF NASAL OBSTRUCTIONS TO OBSCURE CASES OF ASTHMA.

This paper was read by title by Dr. Arthur W. Mayberry, of Toronto. Patients suffering from nasal obstruction are frequently coming before the notice of the busy practitioner. Asthma has a complex etiology, and the close association of this disease with nasal trouble is sometimes very remarkable. Adenoid growths in the pharynx frequently cause asthma, and in recent years much stress has been laid on the nasal origin of this disease. The author quoted Bosworth, who goes so far as to assert that asthma, in a large proportion of cases, is attributed to some form of nasal obstruction, the bronchial spasm being caused through reflex sympathy conducted along the fifth nerve.

ON THE IMPORTANCE OF AN EARLY RECOGNITION OF LOCOMOTOR ATAXIA —DO THE EYE SYMPTOMS ASSIST US?

Dr. J. T. Duncan, Toronto, read this paper, and emphasized the importance of being able to diagnose this disease in order that prompt treatment might be applied. To do this we must be able to recognize the pre-at-axic stage. What are the symptoms? Professor Osler gives them as pains, ocular symptoms, and loss of the knee jerk. What are the ocular symptoms? Strabismus or squint; ptosis or drooping of the eye lid; the fixed pupil (the Argyl-Robertson pupil); inequality of the pupils and optic atrophy.

NOTES ON THE USE OF ADRENALIN.

D. J. Gibb Wishart, Toronto. This is the formula which Dr. Wishart has been using in his office practice, having made several hundred applications, chiefly to the mucous membrane of the nose; one in one thousand, the chloride being dissolved in normal salt solution containing 0.5 per cent. chloretone solution. A 10 per cent. dilution of the above solution, which dilution is equivalent to one in 10,000, has been sufficient to contract the blood vessels in the membranes in a few seconds, and a repetition of the same, or the use of a stronger dilution, will blanch these membranes; especially is this seen to be marked in the nose, where the membranes will become tightly drawn over the turbinated bones, which show up white through it. It has proven itself to be highly useful in rendering operations about the nose practically bloodless; it is not found to answer so well in the removal of adenoids or enlarged tonsils. Dr. Wishart mentioned two cases in particular where it acted very promptly. The bottle in which it is kept must be tightly corked; and the properties of the substance are not destroyed by heat. Since he has added chloretone he is perfectly satisfied as to the stability of the preparation for all practical purposes. In no instance has there been a tendency in the amount of bleeding. Dr. Wishart considers that the drug is a valuable addition to our armamentarium.

Dr. Duncan's paper was discussed by Dr. Wishart, Dr. Trow and Dr. Hunter; while Dr. Wishart's paper brought out a discussion from Dr. Trow, Dr. McPhedran, and Dr. Graham Chambers. Dr. Wishart and Dr. Duncan replied respectively.

DISCUSSION ON GASTRIC ULCER.

Medical Aspect.—This was introduced by Dr. R. D. Rudolf, Toronto. In opening the discussion from a medical point of view, he gave a short historical sketch of the chief literature of the subject, and said during the last thirty years only one important symptom had been added to those mentioned by previous writers, viz.: the very common occurrence of hyperchlorhydria. Avoiding the consideration of the well-known points on the subject, he propounded five questions in connection with gastric ulcer which seemed to him to specially merit discussion. First, is there any relation between gastric ulcer and cancer? Trousseau believed that an actual antagonism existed between the two conditions, while Lebert considered that 9 per cent. of all gastric cancers so arose, and Rosenheim states that 5 to 6 per cent. of all gastric ulcers become carcinomatous. Clinically, the speaker had never seen a case of simple ulcer end in cancer, nor had he seen a case of cancer preceded by ulcer, although such cases undoubtedly occasionally occurred.

Dr. Rudolf had seen pathological specimens illustrating both. Second: Can we diagnose the site of gastric ulcer? This question is becoming more important on account of operations. Ewald states that in 90 per cent. of cases it is impossible to tell whether the ulcer is in the stomach or duodenum, and that usually it is hard to diagnose the site in the stomach. Most gastric ulcers occur on the posterior wall, near the pyloric end. The site of the pain and tenderness; the time the pain occurs after food; the position in which the patient is free from pain, and the presence or absence of gastric dilatation may help, but these are very uncertain facts to lean upon. Thus, in Pinel's famous case, mentioned by Abercrombie, where the patient was *known* to have ulcers near the pylorus, the pain used to occur *immediately* after taking food. The taking the food may not only mechanically irritate the ulcer, but by stimulating the acid secretion peristalsis may cause pain without touching the ulcer. It must further be remembered that there are sometimes several ulcers present. Third question: Does ergot ever stop gastric hemorrhage? Most authorities recommend ergot without question, but we must remember that the hemorrhage tends to be self-limiting from the lowering of the blood pressure and the forming of a clot, and ergot may interfere with this natural cure by raising the blood pressure. Turpentine and other local styptics have no such objection, and calcium chloride increases the tendency to clotting. Fourth question: Are cases of apparently "cured" gastric ulcer "first-class lives" for insurance? The speaker did not think that they were, because sudden perforation might occur after years of quiescence (he had seen two such cases). Ulcers were apt to relapse or to break out in new places. The severer the symptoms of the ulcer had been at the time, especially the hemorrhage, and the shorter the

period since its occurrence, the worse the "life" was. Fifth question—as regards operations: As soon as perforation into the peritoneal cavity be diagnosed, operation should at once be performed; as regards operation where no perforation exists the question was not so easily settled. Severe, uncontrollable hemorrhage might occasionally call for surgical treatment, but the mortality from hemorrhage is surprisingly small, even when this is severe. Dr. Mayo Robson had recently recommended "that after a second bleeding, even during the course of the hemorrhage, if the patient can stand it, or as soon after as his condition will admit, the operation should be done." The speaker was glad to see that his old teacher, Dr. Eyrom Bramwell, challenged this advice (*THE LANCET*, March 9, 1900, page 687). Operation for the less urgent symptoms of gastric ulcer would occasionally be necessary, but in this direction we should proceed with great caution. Dr. Moynihan, in a recent paper (*THE LANCET*, April 27, 1901,) gave a summary of all the cases to date gastro-plasty or gastro-gastrostomy had been performed for "hour-glass stomach." They amounted to thirty-eight in all, and nine of them were fatal, while in many complete relief of symptoms occurred.

Pathology.—This branch of the discussion was led by Dr. H. B. Anderson, Toronto. In his opening remarks he said he would make no reference to ulceration resulting from the breaking down of tubercular foci, syphilitic gummata, or malignant growths, nor of ulceration occurring during the course of acute infective diseases or resulting from the action of corrosive poisons, but would limit the discussion to a consideration of the commonly designated simple, round, perforating or peptic ulcer. From the similarity in all essential points, however, he included the corresponding ulcer at the lower end of the esophagus and in the first part of the duodenum. From post-mortem statistics the frequency of gastric ulcer was in about 5 per cent. of cases, cicatrices being found about three times as often as healed ulcers. From his own experience at autopsies in Toronto he was sure that gastric ulcer did not occur in Ontario so frequently as indicated by the above figures.

The condition occurred most frequently in adults from twenty to forty years of age, but was by no means rare at the extremes of life. The mortality was greater from forty to sixty years of age, no doubt from the lessened reparative power at that period of life. Females were affected more frequently than males, in about the proportion of two to one.

The etiological import of other diseases, especially chlorosis, was dwelt upon. Injury was a factor in rare instances, a statement substantiated by certain experimental data. Occupation, race, climate, habits—all had an indirect influence in some cases, and arterial sclerosis, thrombosis and embolism of the gastric vessels were occasional factors in the etiology of the condition.

All these factors were, however, of secondary importance, and were only active in the presence of an altered condition of the gastric secretion. The localities where this form of ulceration occurred—at the lower end of the esophagus, in the stomach and in the first part of the duodenum—situations exposed to the action of the gastric juice, as well as the not infrequent occurrence of post-mortem digestion of the walls of the stomach,

were strongly suggestive of the importance of this factor, and this had received further direct proof from the discovery of the frequent occurrence of a hyperchlorhydria associated with gastric ulcer from a chemical analysis of the stomach contents obtained after test meals. The failure to find this condition in some cases was not proof that it had not existed at an earlier period in the diseases, for the hyperchlorhydria might afterwards have been lessened as the result of the greater or less degree of gastritis following on the wake of the ulcer. Ulceration did not occur unless there was a disproportion between the acidity of the gastric juice and the condition of the blood. Normally autodigestion of the walls of the stomach was prevented, not by a single chemical reaction in which the acid was neutralized by the alkalinity of the blood and fluids in the tissues, but by the vital resistance of the living cells of the part. He did not think there was anything to uphold the bacterial origin of this form of ulcer urged by some authors.

The pathological anatomy of gastric ulcer and its various terminations were discussed and illustrated by specimens. Healing was the fortunate result in the majority of cases. At other times a fistulous communication was formed with the duodenum, colon or the cutaneous surface, or a subphrenic abscess might result. Adhesion to the pancreas, liver, or to the omentum frequently walled the trouble off. Not infrequently however, peritoneal infection from perforation occurred, and the symptoms might be so intense as to simulate irritant poisoning. Gastrectasia or "hour-glass" deformity from cicatricial contraction at the pyloric orifice, or in the centre of the organ, at times gave rise to serious results. A specimen, showing the development of a carcinoma at the base of an ulcer with a clinical history extending over many years, was presented.

Surgical Aspect.—Dr Henry Howitt, Guelph, conducted this part of the discussion and said, did it never strike you as being peculiar that the best remedies, nitrate of silver and so forth, are germ destroyers? He first took up the procedures for dealing with the ulcer or its results in which perforation is not a factor. In all the operative procedures it was essential to prevent infection of the wound; stomach should be thoroughly washed with aseptic water, by means of siphon tube, immediately before the anesthetic is administered. It is not necessary to make the abdominal incision extensive, the length of the incision would depend upon the amount of contraction, and it is sutured in such a manner that when closed the line of union is at right angles to the original incision. This gives excellent results when properly done. Adhesions render this ideal operation impracticable. The first successful operation was performed in Toronto, 1894, by Dr. Atherton. Up to last September in the neighborhood of 300 operations were reported with a mortality of a little over 45 per cent. Dr. Howitt then referred to cases in his own practice. With regard to the treatment, Dr. Howitt said that as soon as we are satisfied that perforation has taken place, referring to acute cases, he believes it is good practice to give morphia hypodermically, and it further lessens the amount of the anesthetic in the opinion of many. Success largely depends on the shortness of time before operation; delay is dangerous. It is Dr. Howitt's practice to eviscerate the bowels; one or more small incisions in

the prominent cells soon overcomes the distension, and each one is closed before another is made. Attention is now turned to the stomach and the part brought into the wound. The ulcer is incised and opening closed with two or three layers of sutures. When the trouble is in the posterior wall it may be impossible to excise it, in which case it can be generally inverted and closed by layers of sutures. The abdominal cavity should be thoroughly flushed with a stream of saline solution. When drainage is necessary the tubes or gauze should not be introduced through a large wound. The object should be to have primary union to take place in the incision.

Dr. McPhedran, referring to the treatment of simple ulcer, said that the treatment for this is one that is not carried out very effectively. If not successful after a month of rest in bed with medicinal treatment, he would advise operation.

Dr. J. F. W. Ross referred to a case of catarrh of the stomach in a woman of fifty-nine pounds weight, and where he was satisfied before operation that he had to deal with a cancer of the stomach. She recovered and rapidly gained in weight until she reached 140 pounds.

Dr. Bruce referred to a case upon which he had operated.

Drs. Rudolf, Anderson and Howitt replied.

VAGINAL SECTION, EXPLORATORY AND OPERATIVE.

Dr. T. Shaw Webster read a paper with the above title describing several operations performed in that way, one being for the ectopic gestation. He reported good success in them from the vaginal route.

Dr. Noble thought that the vaginal route all right for abscesses, but had a preference for the abdominal in pelvic operations.

Drs. Bruce, Macdonald, Oldright, Ferguson (London), W. J. Wilson and Clouse discussed this paper, the discussion proving an interesting one, although the members were rather impatient for hot soup, it being past the hour for luncheon.

Dr. Webster replied and defended his position ably.

Dr. Bruce L Riordan now passed through the theatre announcing luncheon was now ready in the dining-car, so there was an immediate bolt for the door, and all were soon enjoying themselves at a very fine spread provided by the Committee of Arrangements. Afterwards, bright and happy speeches were made by several of the members, the audience simply calling for their favorites, and no one being specially set down for any toasts. Amongst others who said some good things were Dr. Harrison, Dean Geikie, J. C. Mitchell, N. A. Powell, George Bingham and the President.

SECOND DAY—AFTERNOON SESSION.

THE ROENTGEN RAYS IN THE DIAGNOSIS OF URINARY AND BILIARY CALCULI.

This paper, X-ray photos and specimens of calculi, which proved a very interesting demonstration, was presented by Dr. S. Cummings, of Hamilton.

Dr. McGillivray, of Toronto, asked if the diagnosis is always positive.

Dr. Cummings replied that if any errors, they are due to operator, not to X-ray itself.

There was a demonstration of skiagrams in an adjoining room.

PRELIMINARY REPORT ON THE RELATIONS OF HYPERCHLORHYDRIA TO
"BILIOUS ATTACKS," SOME FORMS OF ECZEMA GOUT
AND MUSCULAR RHEUMATISM.

Dr. Graham Chambers, Toronto, stated that on several occasions he examined the gastric contents of patients of apparently normal digestion and found hydrochloric-superacidity, although in some of them there was a history of "bilious attacks," which were probably attacks of hyperacidity. He considers that the gastric distress, which is present in these cases, is more or less due to the hyperesthesia of the mucous membrane of the stomach, as well as to the excessive acid contents. The commingling of these two neuroses, hyperchlorhydria and hyperesthesia gastrica, makes an investigation into the relations of the former to "bilious attacks," eczema, muscular rheumatism and gout a very definite one, but he cannot but think that a general irritable condition of the gastric nerves must produce some changes in the sympathetic and cerebrospinal centres, which would no doubt lead, or tend to lead, to diseases in other organs.

Dr. Chambers' attention was first called to this subject about two years ago, when he observed that the internal treatment, both diatetic and medicinal, which he was accustomed to give in cases of hyperchlorhydria, was approximately the same as that which he was using in some forms of acute eczema, and in both cases it gave very satisfactory results. In his experience "bilious attacks" are very frequent in cases of chronic hyperchlorhydria; he has also found that symptoms of indigestion are of frequent occurrence in eczema, and are usually of a character which indicates hyperchlorhydria. He has examined the gastric contents of six cases of eczema, with symptoms of dyspepsia, and in five of these there was an excess of HCl in the gastric contents. He gave notes of cases in illustration of his researches. Acidity is a common symptom in gouty subjects, and Dr. Chambers believes that a thorough investigation of the subject would prove that the "acidity" of the gastric contents is not due to organic acid at all, but that hydrochloric acid will be found to play an important part in it. With regard to muscular rheumatism, we know very little about the etiology of it. Clinically, we have found that muscular rheumatism and gout are in some way related; and in regard to relations of hyperchlorhydria and muscular rheumatism, Dr. Chambers has observed that they are frequently associated, but whether the muscular rheumatism is the result of the hyperchlorhydria, he is at the present time unable to say.

Dr. Bryce discussed the paper.

MEDICAL TREATMENT OF SURGICAL TUBERCULOSIS.

Dr. W. B. Thistle of Toronto, said: It is important to remember this fact, that there is no difference in the nature of the disease, whether con-

sidered surgically or medically, and especially is this so when we come to consider treatment. We hear on all sides that it is a curable disease, and complete cure often now happily results from medical treatment. Dr. Thistle has observed that tubercular cases requiring surgical treatment in the great majority receive little or no medical treatment. The subjects of surgical tuberculosis should have the fullest advantage of sunshine and fresh air as well as those suffering from the disease in its medical aspect.

TREATMENT OF POST-OPERATIVE PERITONITIS.

By Walter McKeown, Toronto. The paper suggested that this condition should be treated by the use of decinormal salt solution, either subcutaneously or intravenously, and enemata of strong solutions of sulphate of magnesia. The toxins will dialyze; the antitoxins will not. If, then, the toxins can be eliminated with sufficient rapidity, the disease will limit itself as a result of the formation of antitoxin together with the plugging of the peritoneal lymphatics. The blood is diluted by the addition of the salt solution, and this is drawn out into the rectum by means of a higher osmotic pressure carrying the toxins with it. He claims that even with a condition of paralysis of the bowel, toxins will dialyze in this way. He suggests that if a patient were placed in a salt bath, the toxins would probably osmose directly through the skin. That osmosis does not take place from without in through the skin, does not prove that the reverse process will not occur. Osmosis is known to take place much more rapidly in one direction through the shell membrane of the egg than the other.

SECOND DAY—EVENING SESSION.

Dr. R. A. Pyne, the First Vice-President, occupied the chair.

The committee on credentials recommended the following for membership, which was adopted: R. W. Garrett, Kingston; George Sherck, Cheapside; W. A. Scott, Courtright; Daniel Buchanan, Galt; L. C. Prevost, Ottawa; Milton Baker, Springfield; Donald McGillivray, Toronto; A. E. McColl, Belleville; Arthur I. Brown, Holstein.

The following constituted the Nominating Committee: Drs. Geo. A. Bingham, A. McPhedran, Burt (of Paris), Powell (of Toronto), Mitchell (of Enniskillen), Harrison (of Selkirk), and Macdonald (of Toronto) Drs. E. Clouse and Price-Brown acting as scrutineers.

This committee reported as follows, which, on motion, was received and adopted:

President, N. A. Powell, Toronto; First Vice-President, R. Ferguson, London; Second vice, R. W. Garrett, Kingston; Third, L. C. Prevost, Ottawa; Fourth, R. L. Turnbull, Goderich; General Secretary, Harold C. Parsons, Toronto; Assistant, George Elliott, Toronto; Treasurer, A. R. Gordon, Toronto.

The report of the Committee on Public Health was presented by Dr. Roseburgh, seconded by Dr. William Oldright, and adopted.

That on Tuberculosis, by Dr. W. B. Geikie, seconded by Dr. H. J. Hamilton, and adopted.

That on Hospital Abuse was presented by Dr. Webster, in the absence of the chairman, Dr. W. J. Wilson, seconded by Dr. W. A. Young, and adopted.

The Committee on Inter-Provincial Registration had nothing at the present time to report.

Treasurer's report was presented by Dr. G. H. Carveth, and showed last year's receipts to have been \$376.30, and expenditures \$334.66, leaving a balance of cash in bank of \$35.64. This was audited by Dr. R. D. Rudolf, and, on motion, adopted.

The report on Necrology was presented by Dr. George Bingham. It included the names of C. W. Covernton, Toronto; C. E. Martin, Toronto; J. D. Macdonald, a Past President, Hamilton; J. E. Eakins, Belleville; Isaac Ryall, Hamilton; A. K. Sturgeon, Petrolia; Dixon, Pembroke; Mennie, Toronto; J. A. Watson, Toronto; T. H. Little, Toronto; Jonathan Robinson, Toronto; J. H. Parsons, Toronto; and Irving, St. Mary's.

The Ontario Medical Library was voted \$50.00 on motion by Dr. R. A. Reeve, seconded by Dr. H. T. Machell.

A notice of motion was given by Dr. Graham Chambers, and seconded by Dr. H. B. Anderson, that the business session at future meetings be held on the evening of the first day. This will be referred to the Committee on By-laws.

Resolution of regret *re* non-payment of the annual \$2.00 fee of the Ontario Medical Council was introduced by Dr. Ferguson, of London, seconded by Dr. Gibson, of Belleville, that some members of the profession in the province had refused payment of this annual fee. This Association regards the imposition of this fee as most reasonable, payment of which should meet with a cheerful response on the part of every member of the profession. This was carried unanimously amid much applause and without a dissenting voice.

Dr. Wishart, Toronto, chairman of the Special Committee to draw up a resolution *re* vaccination.

Resolved, That the Ontario Medical Association desires hereby to reassert the opinion of the medical profession of this province:

1st. That the principles of Jennerian vaccination against smallpox, which have been now attested by the experience of more than a century, are scientifically correct.

2nd. That in order to carry out the protection through vaccination against smallpox it is necessary that the lymph used in the operation be of normal quality, and that this can be shown only by a proper amount of systemic reaction to the vaccine, as determined by the character of the vesicles, and that the absence of a normal reaction, as shown by the presence of vesicles, is no positive evidence of the immunity of the person either against vaccinia or smallpox.

3rd. That this Association emphasizes the urgent necessity that the scarification of the skin be sufficiently extensive to secure such reaction, and to this end recommend that from three to five insertions each of a quarter of an inch square be made in each vaccination. This was carried.

Medical Defence Union. On motion of Dr. J. F. W. Ross, seconded by Dr. A. Primrose, a committee was appointed to inquire into this matter, to report at the next meeting of the Association in 1902.

Votes of thanks were passed to the Minister of Education for the use of the building, and also to the President, Dr. McKinnon, for his exceedingly able address.

During the progress of the meeting it was addressed by the Honorable, the Minister of Education, Mr. Harcourt, who advised them strongly to keep up the standards of matriculation and the professional examinations.

Dr. N. A. Powell was then installed in the office of President, and after brief acknowledgment, the 1901 meeting adjourned.

MISCELLANEOUS.

NIGHT SWEATS.—The drugs which have hitherto played the chief role in relieving this condition are, camphoric acid and agaricin. Late investigations show these are surpassed by tellurate of sodium, but this possesses a very repulsive garlic-like odor, which will probably militate against its extended use.

The dose is eight grains, given in the evening. As the drug possesses antiseptic properties, it will possibly prove effective in ameliorating the severe pulmonary symptoms. It is said to prove equally beneficial in other diseases characterized by abundant excretion or perspiration, such as rheumatism, typhus, nervous exhaustion, etc.—*Dietetic and Hygienic Gazette*.

BROMIDROSIS.—Stockwell (*Detroit Medical Journal*) says there is nothing equal to a strong solution of sodium bicarbonate for the obliteration of fetid perspiration.

The Treatment of Trigeminal Neuralgia with Galvanism.

Dubois (*Bull. gén. de Thérap*) refers to successes in the treatment of tic douloureux with the constant current recorded by Onimus, Legros, Niemeyer, Benedikt and Dalby. His own patient began to have neuralgic paroxysms at the age of forty. For ten years he was treated with many different drugs, but without relief. At fifty-one he commenced to receive electrical treatments. The positive pole divided into three terminals by means of a divided rheophore, was applied to the supra-orbital nerve, the infra-orbital nerve and at the mental foramen. The negative pole was placed on the neck opposite to the superior cervical ganglion. From twelve to fifteen milliamperes, as it is estimated, were passed for seven minutes. An amelioration of the symptoms at once commenced, and after a week's treatment he obtained absolute freedom

from the attacks. The treatment was continued three times a week for a year. As a consequence, he has remained free from even the slightest paroxysm for twenty-six years. Besides the above case, three others have been treated by the same method. One, the subject of five surgical operations, was not relieved; in the other two an apparent cure was effected; at any rate, an extraordinary long remission of the pain resulted.—*Brit. Med. Jour.*

Hay Fever.

In a paper having the above title and published in the *International Medical Magazine*, Dr. E. B. Gleason says:

"Somewhat recently the attention of the profession, chiefly through the writings of Bishop, of Chicago, has been directed to the fact that the neurotic condition of the patient and the hypersensitiveness of the nasal passages were often due to an excess of uric acid in the blood, and that this excess could be eliminated by the ingestion of mineral acids.

Probably any mineral acid would prove efficacious, but there are two which suggest themselves as peculiarly efficacious—hydro bromic acid, because of its sedative qualities, and nitro-muriatic acid, because it is thought to limit the production of uric acid.

My experience has been limited to the effects of nitro-muriatic acid, which for the past three years I have prescribed in doses of three to five drops of the freshly prepared concentrated acid after meals and sometimes also at night. The dose should be diluted with a half tumblerful of water, and the patient, after taking the medicine, should rinse out his mouth and swallow another half tumblerful of water.

The results of the remedy are apparent within forty-eight hours, and the relief of all hay fever symptoms is usually sufficient to enable the patient to remain at home and attend to his ordinary business engagements in comparative comfort."—*The Med. Bulletin.*

Removal of Ear-Wax.

Hardened wax in the external ear can often be removed readily by injections of warm water and soap, soda or ammonia. Many cases resist this and require the softening effects of glycerine or sweet oil for a day or two before syringing. Do not bother with these long processes, but use a half-strength solution of hydrogen dioxide in the ear for about five minutes. This will disintegrate the hardest plugs, and they can be removed with very little syringing. This process never causes irritation or inflammation. Do not use too much force with the syringe; wipe the ear perfectly dry with absorbent cotton and apply petrolatum; wear a small piece of cotton in the ear for a day or two after removal.—*Phil. Med. Jour.*

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM
AND NEWS.

The Oldest Medical Journal in the Dominion : Established 1867.

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EDITORIAL.

THE ONTARIO MEDICAL ASSOCIATION.

The twenty-first annual meeting of The Ontario Medical Association was held in the Normal School buildings, Toronto, on June 19th and 20th. The attendance was well up to the average—about one hundred and fifty signing the register, and a gratifying feature of the meeting was the large representation of younger men. The luncheon was an especially pleasant social feature of the meeting, the speeches were bright, and the whole affair did credit to the excellent chairman of the Committee of Arrangements, Dr. B. L. Riordan, and his associates. The officers of the Association and the various committees worked hard to ensure the success of the meeting and may fairly be congratulated on the results of their efforts.

Dr. McKinnon made an excellent president, his quiet, unassuming manner, and fairness commanding the confidence of the Association.

Without any desire to indulge in captious criticism, however, may the members not fairly and profitably ask if the meetings of the Ontario Medical Association reach the high standard one would expect from a

body representing the profession of this province? Is there not room for improvement in the character of the work done by the Association? With 2,500 qualified practitioners in Ontario, and a membership of nearly 1,000 in the Association, does an attendance of one hundred and fifty at the annual meeting and the presentation of some twenty-five papers indicate a satisfactory state of affairs? There is some good reason for this lack of interest in the Association which it is the duty of the officials to discover, and if possible, remedy.

In the first place there is a noticeable lack of originality in the papers presented, which does neither credit nor justice to the profession of this province. We believe this is largely due to the custom, for some years back, of having symposiums or discussions on certain subjects chosen by the Committee on Papers, and making these the chief feature of the meeting. It would certainly be better to have a man select his own subject—a line upon which he has recently been working or has recently had experience, than to set a topic for him to work up by a rehash of literature. Again, sufficient time is not allowed for the preparation of anything that is of much value after the invitation of the Association to prepare a paper is received. The Committee on Papers should be actively at work at least six months in advance of the meeting, so that ample time for thorough preparation is allowed. The receipt of an invitation to read a paper a month or six weeks at most before the meeting, in itself suggests that nothing much is expected. If live members of the profession in different parts of the province were communicated with six months at least before the meeting, they would know that a high standard of excellence was set and would rise equal to the occasion.

The matter of publication of the proceedings of the Association is another thing which should receive most careful consideration. It does little credit to the progressiveness of spirit of a large provincial association that it cannot finance the publication of its proceedings. If a number of really valuable papers was read, the proceedings would find a ready sale among the members and this would cover the expense of publication. On the other hand, nothing would have a more wholesome effect in stimulating more original work and in bringing out a better class of papers than the knowledge that they would be set in cold type for future reference and comparison.

The president of the Association for the ensuing year, Dr. N. A. Powell, has had a wide experience in medical society work. He is possessed with the knowledge, energy, progressiveness and a desire to excel which eminently fit him for the high honor he has received. While the past history of the Association has been very creditable, we believe the

time for a move forward has come. No one could be better qualified than the President elect to lead in this movement and his stewardship will be watched with interest. Let him and his associates in office take time by the forelock, and we venture to predict that the next meeting will be a record-breaker in the history of the Ontario Medical Association.

THE ONTARIO MEDICAL COUNCIL.

At the recent meeting of the Ontario Medical Association a strongly worded resolution was introduced sustaining the action of the Medical Council in reference to the collection of the annual assessment. The resolution was unanimously adopted in general session, without discussion. The sentiments expressed by members of the Association from different parts of the province at the luncheon, and the manner in which they were received by those present left no room to doubt that in opposing the payment of the annual fee the "Defence" Association have neither the sympathy nor support of the profession at large. The older members who could contrast the condition of affair before the existence of the College of Physicians and Surgeons were particularly strong in urging loyal support to our governing body. As that Nestor of the profession, Dr. Harrison, of Selkirk said, matters are entirely in the hands of the medical electorate and if the present representatives have failed in their duty to the profession, let them be replaced at the next elections for membership in the Council by others, who will carry out our wishes. In our national affairs if a government fails to carry out the wishes of the people, the remedy lies in electing other representatives, not in overthrowing parliamentary government. The act of the local legislature constituting the Medical Council has given our profession privileges of self-government of inestimable value, which should be properly esteemed and jealously guarded. We believe that these privileges have not been abused but have been utilized for the mutual benefit and protection of the public and the profession.

We do not contend that the Medical Council has invariably pursued a course beyond criticism in the management of matters under their control, but we do believe that they have done what they have considered to be best, and, on the whole they have had a keen regard to the responsibilities placed upon them. Nor do we wish to minimize the good effect of a vigorous opposition in any representative body. Complacent acquiescence in everything is a danger to be avoided. But let the opposition be on broad and generous principles, not merely factious criticism, attempting to breed dissension and jealousy in the ranks.

this sort of opposition is a waste of time and energy, and places our governing body and the profession at large in a most humiliating position before the public. It moreover prevents the consideration of matters of the deepest interest to the profession, as the formation of a medical defence union, the adoption of interprovincial registration, the establishment of a provincial museum and other affairs of prime importance. Haggling over the payment of a trifling yearly assessment of two dollars for the privileges granted us is not endorsed by the profession and prejudices the "Defence" Association's advocacy of other matters wherein they would have the backing of the profession at large as a change in the present over-representation of the Homœopathic body, as well as that of defunct medical institutions, anomalies which should be carefully considered and remedied as soon as possible.

PROGRESS IN THE COSMETIC ART.

According to the London Mail a resourceful American lady has discovered the secret of perennial loveliness, and now upon payment of a fee. the rich, ripe bloom of healthy youth can be indelibly fixed upon the cheeks of all who desire it. Instead of the more or less crude and inartistic applications of rouge hitherto resorted to, requiring frequent renewals, permanent blushes may now be obtained by a process of tattooing. The operation, by the injection through a fine needle of a suitable pigment of the nature of rouge, produced such excellent results with the fair American who submitted herself to the experiment, that many others in fashionable circles, who were entering the sere and yellow period or who perhaps had never been dealt kindly with by Nature in this respect, followed her example and now are the happy possessors of a ruddy bloom made to order. Whether this tattooed beauty will be a source of permanent happiness or not, remains to be seen.

An equally interesting complement to the above mentioned procedure, has been successfully experimented with by a physician named Gersuny. By the subcutaneous injection of sterilized white vasiline, made fluid by heating, wrinkles in the face and elsewhere may be removed, cavities filled up, and many deformities obliterated. The tissues are quite tolerant to this substance and it is ordinarily quite innocuous.

It has also been made to serve more useful purposes, having been successfully injected around varices and about relaxed orifices, producing a cure by the mechanical support afforded. The method is easy of application and causes little discomfort. Unfortunately the danger of embolism must always be present, and already fatal results have been reported as following the procedure.

Of the ultimate effects, locally or generally, in either of these operations, of course nothing is known, and whether we have reached the time when the matter of wrinkles and fading complexions will no longer cause feminine heart aches, Experience alone will answer.

CANADIAN MEDICAL ASSOCIATION.

WINNIPEG MEETING, AUGUST 28TH TO 31ST, 1901.

The question now seems to be, how is one to make arrangements to get away at the time of the meeting, for it seems to be universally conceded that to attend the Winnipeg Meeting is the proper thing to do. The Railways, having granted a single return rate to the meeting, have assisted in breaking down one of the barriers, and now one hears from all sides of physicians intending to make Winnipeg the central point of their holiday trip, and Winnipeg is making preparations for a great gathering! Many physicians, it seems, will also take advantage of the offer of the single fare rate from Winnipeg to points in Manitoba, the North West, British Columbia and North Dakota, after they have enjoyed the hospitality of the Winnipeg profession.

The question of Dominion Registration will come up for a full discussion—it is hoped for the last time before this thing to be desired becomes a realization.

The following is a list of some of the papers already promised:—

The Address in Medicine—J. K. Jones, Winnipeg.

The Address in Surgery—O. M. Jones, Victoria.

The Address in Gynaecology—Thomas S. Cullen, Johns Hopkins, Baltimore.

The early diagnosis and treatment of pulmonary tuberculosis—D. Gilbert Gordon, Toronto.

The nose and throat in general practice—John Hunter, Toronto.

Remarks on some interesting diseases of the age—G. H. Burnham, Toronto.

Orthopaedic treatment of deformities and disabilities resulting from paralysis—B. E. McKenzie, Toronto.

Title to be announced—D. J. Gibb Wishart, Toronto.

A practical way of distinguishing between the human and animal blood—G. Silverthorne, Toronto.

Infectious pneumonia—W. S. Muir, Truro, N. S.

Sclerotic ovaries—A. L. Smith, Montreal.

Removal of large tumor from the os uteri after labor had set in—A. Armstro. g, Arnprior.

Tuberculosis in milk—Prof. Russell, University of Wisconsin.

The present outbreak of smallpox in America—H. M. Bracken, Health Officer, Minnesota.

Haematology—L. H. Warner, New York.

Skin diseases—Lantern Demonstration—F. J. Shepherd, Montreal.

The treatment of consumption in special institutions—Dr. Richer, Montreal.

Disposal of tuberculous sputum—J. H. Elliott, Gravenhurst.

Title to be announced—G. Chambers, Toronto.

Chronic ulceration of the stomach simulating cancerous disease—

Relation of a case of gastro-enterostomy with Murphy's button—recovery—J. F. W. Ross, Toronto.

Report of cases treated with the hot air bath—W. H. Pepler, Toronto

Title to be announced—J. N. Hutchison, Winnipeg.

Some Forms of gastric hyperacidity and their treatment—C. P. Martin, Montreal.

Syphilis as seen by the ophthalmic surgeon—F. Buller, Montreal.

On the necessity of a better recognition and isolation of trachomatous patients in Canada—W. Gordon M. Byers, Montreal.

Title to be announced—J. L. Bray, Chatham, Ont.

Epidemic cerebro-spinal meningitis—A history of some cases—James McKenty, Gretna, Man.

Pulmonary tuberculosis, its treatment and prevention—A. P. Proctor, Kamloops, B. C.

Mild smallpox—G. A. Kennedy, Macleod, Alta.

Title to be announced—C. J. Fagan, Victoria, B.C.

EDITORIAL NOTES AND NEWS-ITEMS.

The Retiring Resident Medical Staff, Toronto General Hospital.

Dr. A. J. Mackenzie remains in Toronto, taking Dr. Oldright's practice for a time, Dr. W. A. Kerr begins practice at Ailsa Craig, Dr. A. C. Hendricks opens an office on College St. Toronto, Drs. E. G. Weir and H. R. Smith have accepted positions on the Central Algoma Railway, Dr. G. H. Maclaren goes to Europe to spend some time in post graduate study, Dr. J. Gow has been appointed resident at Mt. Airy Children's Hospital, Maryland and Dr. A. T. Stanton has been appointed Surgeon, R. M. S. "Empress of China."

Resident Medical Staff—Toronto General Hospital.

The following recent graduates have been appointed to the House Staff of the General Hospital for the year 1901-2: E. S. Ryerson, Duncan M. Anderson, W. J. Macdonald, A. G. A. Macdougall, H. S. Hutchinson, W. G. Collison, J. E. Martin, F. A. Cleland, H. Trout, W. H. Cronyn.

Resident Medical Staff—St. Michael's Hospital.

The following gentlemen have been appointed for the ensuing year: Drs. P. W. O'Brien, Chas. R. Elliott and H. R. Parent.

Provincial Board of Health Reports.

The total number of deaths registered in the Province of Ontario for May of the current year was 2,027 as compared with 2,162 in the corresponding month last year. Of the total numbers of deaths 210 or nearly 10 per cent. were due to consumption, compared with 239 or over 11 per cent. a year ago. There were 2 fatal cases of small pox reported; also 32 deaths from diphtheria and 14 for scarlet fever, a slight increase in both over the number in May 1901.

Bequest to Harvard Medical School.

J. Pierpont Morgan has donated \$1,000,000 to Harvard Medical School for the purpose of providing new buildings. When will some of Toronto's millionaires startle the community by emulating the example of these American philanthropists?

PERSONAL.

Dr. Jas. D. Lyness (Trinity '01) is opening an office in Chicago.

Dr. H. E. Safford, of Detroit, recently spent a week with friends in Toronto.

Dr. Ralph C. Williams (Trinity, '98), of Brooklyn, N.Y., is visiting friends in Toronto.

Dr. J. T. Fotheringham returned from Europe July 15th and has resumed practice.

Dr. Laughlin MacKechnie (Toronto '92), of Vancouver, B.C., spent a week in Toronto recently.

Dr. F. W. Marlow, late of St. Michael's Hospital staff, is practising with Dr. N. A. Powell for the summer.

The many friends of Dr. Adam Wright will be pleased to hear of his return from Europe greatly benefited in health.

Dr. R. H. Hoops (Trinity '01) has been appointed House Physician at the Home for Incurables for the coming year.

Dr. H. P. Martin (Trinity, '98), of Toronto, sails for Europe shortly where he will spend a year or more in hospital work.

Dr. Chas J. Levy, of the recent graduating class, Trinity Medical College, has left for a year's post graduate work in Europe.

Dr. E. G. Rawlinson, of Toronto (Trinity '99), has left for Europe where he will spend about a year in post graduate work.

Dr. Arthur Mayberry, 253 Spadina Ave., will in future confine his attention to special practice—nose, throat, heart and lungs.

Dr. H. D. Weaver (Trinity '96), assistant in pathology in the Medical department of Dalhousie College, Halifax, is spending some time in Toronto.

Dr. W. H. Marshall, gold medalist at Trinity University at the recent examinations, has taken up practice for a year at Vanderbilt, Mich.

Dr. Charles A. Hodgetts, of Spadina Ave., has returned to the city after superintending the small-pox epidemic in Northern Ontario for some time.

Dr. Graham Chambers has been appointed Professor of Dermatology and Assistant Professor of Clinical Medicine at the Women's Medical College.

Dr. Alex. Primrose, of Toronto, delivered the address in Surgery at the meeting of the Maritime Medical Association in Halifax, on July 3rd and 4th.

Dr. John A. Ferguson, of College St., was presented with a beautiful silver tea service by the officers of the Grand Camp of the Sons of Scotland to mark their appreciation of the valuable services he has rendered the Order.

Dr. A. T. Stanton (Trinity '99) who has served on the resident medical staffs of the Toronto General Hospital and the Hospital for Sick Children, has been appointed surgeon on the C. P. R. S. S. "Empress of China" from Vancouver to Hong Kong.

Medical Council Examiners for 1901-2: Dr H. B. Anderson, Toronto, Anatomy, descriptive; Dr. W. G. Anglin, Kingston, Theory and Practice of Medicine; Dr. R. N. Horton, Brockville, Midwifery, Operative and other than Operative, and Puerperal Diseases; Dr. A. Primrose, Toronto, Physiology and Histology; Dr. J. W. Edgar, Hamilton, Surgery, Operative and other than Operative; Dr. W. Gunn, Clinton Medical and Surgical Anatomy; Dr. Graham Chambers, Toronto, Chemistry, Theoretical and Practical, and Toxicology; Dr. J. W. Schooly, Welland, Materia Medica and Pharmacy; Dr. J. H. McLellan, London, Assistant Examiner to the Examiner on Surgery, Diseases of Women; Dr A. Haig, Kingston, Assistant Examiner to the Examiner on Medicine, Diseases of Children; Dr. G. H. Field, Coburg, Second Assistant to the Examiner on Medicine, Pathology, Therapeutics and Bacteriology; Dr. E. T. Adams, Toronto, Homeopathic Examiner.

EXAMINATION OF COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

The following candidates passed the final examination :—W. J. Abbott, Brockville ; D. M. Anderson, Toronto ; F. W. Birkett, Ottawa ; W. T. Burns, Toronto ; E. L. Brown, Chesterville ; C. T. Bowles, Ottawa ; A. Bourque, St. Eugene ; F. A. Clarkson, Toronto ; H. L. Collins, Kincardine ; A. C. Campbell, St. Thomas ; H. E. Clutterbuck, Toronto ; C. J. Currie, Toronto ; E. N. Coutts, Durham ; W. R. Cook, Fordwich ; B. A. Cohoe, Toronto ; W. H. Cronyn, London ; F. A. Cleland, Meaford ; A. Chevrier, Ottawa ; H. G. Downing, Woodstock ; H. Dittrick, St. Catharines ; I. Dixon, Walkerton ; D. R. Dunlop, Fordwich ; C. C. Elliott, London ; J. W. Edwards, Kingston ; E. Flath, Toronto ; J. I. Ferguson, London ; J. W. Fitzgerald, Sanborn ; C. C. Grant, St. Thomas ; H. S. Hutchison, Toronto ; V. A. Hart, Dalston ; D. C. Jones, Brockville ; W. B. Kayler, Toronto ; T. W. Kirby, Sault Ste. Marie ; F. E. McLoghlin, Hamilton ; A. K. Morgan, Adelaide ; A. H. Montgomery, Brantford ; A. J. G. MacDougall, Toronto ; W. G. Montgomery, Wroxeter ; J. E. Martin, Langton ; F. W. Marlow, Blackstock ; M. D. McKichan, Hamilton ; W. F. McKay, Beaverton ; Miss Minnie McDonald, Hagersville ; A. F. McLaren, Lancaster ; P. W. O'Brien, Toronto ; J. M. Potts, Sterling ; H. E. Paul, Newburg ; A. R. Perry, Mount Forest ; C. T. Pigot, London ; A. W. Richardson, Kingston ; R. M. Rutherford, Hawkesbury ; E. S. Ryerson, Toronto ; H. P. Ross, Exeter ; E. J. Stubbs, Stratford ; W. E. Storey, Windsor ; G. B. Snyder, Ridgeway ; G. S. Sadler, Pakenham ; H. Softley, Feversham ; J. H. Trout, Toronto ; C. C. Tatham, Listowel ; W. G. Tyner, Kingston ; C. L. Taylor, Wardsville ; S. Thompson, Strathroy ; F. C. Trebileck, Enniskillen ; J. P. F. Williams, Georgetown ; J. Webb, Hamilton.

INTERMEDIATE.

The following candidates passed the intermediate examination :—W. J. Abbott, Brockville ; D. M. Anderson, Toronto ; J. W. Atkinson, Avon ; W. T. Burns, Toronto ; W. J. Brown, Lindsay ; J. G. Bogart, Kingston ; C. T. Bowles, Ottawa ; A. Bourque, St. Eugene ; F. W. Birkett, Ottawa ; A. C. Campbell, St. Thomas ; C. J. Currie, Toronto ; J. B. Coleridge, Ingersoll ; O. W. Colbeck, Toronto Junction ; C. C. Campbell, Listowel ; W. A. Cerswell, Bond Head ; W. R. Cook, Fordwich ; R. H. Carseadden, Morewood ; F. J. Colling, Toronto ; F. J. Carrharris, Kingston ; B. A. Cohoe, Toronto ; W. H. Cronyn, London ; F. A. Cleland, Meaford ; A. Chevrier, Ottawa ; F. P. Coates, Streetsville ; H. E. Clutterbuck, Toronto ; J. T. Dixon, Hamilton ; G. Davis, Cayuga ; J. E. Drury, Dalston ; I. Dixon, Walkerton ; C. R. Elliott, Alvinston ; J. W. Edwards, Kingston ; W. C. Fawcett, London ; C. D. Ferguson, Port Stanley ; J. I. Ferguson, London ; T. S. Genge, Halleford ; W. S. Grimshaw, Kingston ; A. J. Grant, London ; H. S. Hutchison, Toronto ; John Herod, Toronto ; W. T. Hamilton, Motherwell ; V. A. Hart, Dalston ; R. J. Kee, Stanley Mills ; D. C. Jones, Brockville ; W. H. Lowry, Guelph ; C. P. Lusk, Toronto ; D. R. Lonsborough, Sea-

forth; A. H. Montgomery, Brantford; A. J. G. MacDougall, Toronto; W. G. Montgomery, Wroxeter; K. MacKinnon, Guelph; R. T. MacLaren, Columbus; A. D. MacIntyre, Glencoe; G. E. R. McCartney, Binbrook; M. D. McKichan, Hamilton; G. D. McIlwraith, Hamilton; W. McIntyr, Rosedale; J. McCulloch, Port Perry; W. F. McKay, Beaverton; J. A. McCollum, Toronto; Minnie McDonald, Hagersville; W. B. McDiarmid, Maxville; L. McLeay, Gravenhurst; J. M. Oswald, Windsor; R. N. Parent, Windsor; R. Parsons, Emery; G. R. Pirie, Hamilton; H. E. Paul, Newburgh; A. Rainay, Georgetown; A. B. Rutherford, Owen Sound; E. Richardson, Brockville; C. H. Reason, London; J. Rogers, Belmont; A. W. Richardson, Kingston; R. M. Rutherford, Hawkesbury; W. C. Redmond, Bethel; W. E. Storey, Windsor; G. W. Smith, Almonte; J. A. Smith, Hamilton; J. Smillie, Bluevale; A. T. Steele, Orangeville; R. D. Sproat, Milton; G. S. Sadler, Pakenham; A. Turner, Southwold; J. H. Trout, Toronto; C. C. Tatham, Listowel; W. G. Tyner, Kingston; D. G. Whealey, Toronto; C. S. Wainwright, Orillia; L. N. Whitely, Londesboro.

PRIMARY.

The following candidates passed primary with honors:—J. I. Armstrong, London; C. C. Cragg, Brighton; W. T. Gemmell, Seaforth; W. A. Graham, C. C. Kinster, Toronto; J. D. Leeson, Aylmer; F. C. Neal, Walton; G. E. Wilson, Attwood.

The following have passed primary:—Miss Jessie Allyn, Smith's Falls; S. F. Abbott, London; C. T. Bowles, Ottawa; R. S. Brewster, Sunderland; E. C. Beer, London; M. D. Buchanan, Zurich; J. H. Biggar, Toronto; W. T. Babb, Carlingford; Miss Mary Brydon, Ottawa; C. T. Ballantyne, Ottawa; J. M. Baldwin, Toronto; J. V. Brown, Barrie; E. Brandon, Cannington; F. M. Bell, Kingston; A. Bourque, St. Eugene; W. J. Bell, Toronto Junction; F. W. Birkett, Ottawa; T. A. Carson, Orangeville; K. Colbeck, Colbeck; A. H. Cook, Toronto; A. Chevrier, Ottawa; F. P. Coats, Streetsville; A. H. Campbell, Ailsa Craig; G. E. Chapman, London; T. V. Curtain, Brockville; H. E. Clutterbuck, Toronto; C. E. Duggan, Oil Springs; I. Dixon, Walkerton; D. Evans, Virginia; J. W. Edwards, Kingston; P. J. Fleming, Dundas; R. F. Foster, Toronto; E. V. Frederick, Campbellford; G. N. Fish, Toronto; J. I. Ferguson, London; G. C. Ferrier, Kingston; W. E. Gallie, Barrie; G. E. Greenway, Little Britain; E. L. Hodgins, Lucan; K. H. Holmes, Chatham; B. H. Hamilton, Auburn; C. M. Heydon, Toronto Junction; L. R. Hess, Hamilton; J. H. Hamilton, Nelson, B. C.; C. H. Hair, Lavender; D. H. Houston, Belleville; W. B. S. Hunt, J. G. Hunt, London; V. A. Hart, Dalston; R. Ingram, Ridgeway; D. C. Jones, Brockville; L. W. Jones, Kingston; D. S. Johnston, Orillia; W. J. Kerfoot, Minesing; D. P. Kappelle, Hamilton; W. B. Kayler, Toronto; T. W. Kerby, Sault Ste. Marie; W. D. B. Kennedy, Kingston; Miss Eleanor F. Lucas, Toronto; C. M. MacKay, Woodstock; W. N. Meldrum, Ayr; W. W. Milburn, Peterborough; F. E. Mellow, Sillsville; J. Moore, Trowbridge; L. McLeay, Gravenhurst; H. McLean, Glencoe; A. McInnes, Bognor; R. P. McLaughlin, Cumberland; W. McTavish, Palmyra. P. McCue, Melanethon; T. O. McLaren, Lancaster; W. B. McDiarmid, Max-

villie; T. H. McColl, Wallacetown; B. F. O'Reilly, Toronto; J. A. Oille, Sparta; J. R. Parry, Dunnville; J. Phillips, Hewitt; H. E. Paul, Hewburg; W. J. Patterson, Peterborough; P. F. Quinlan, Stratford; R. M. Rutherford, Hawkesbury; F. A. Ross, Guthrie; Miss Olive Rea, Toronto; J. M. Robb, Stratford; A. W. Richardson, Kingston; R. M. Reid, Renfrew; W. Redmond, Bethel; A. A. Staley, Wolfe Island; D. T. Smith, Ottawa; W. E. Somers, Waterford; S. Singer, Toronto; C. B. Stone, Peterborough; N. H. Sutton, Ida; E. Sheffield, Peterborough; D. A. Sinclair, Toronto; D. J. Sweeney, Caledon; D. M. Sutherland, Norwich; G. S. Sadler, Pakenham; W. G. Tyner, Kingston; F. J. C. Tindle, Peterborough; A. Turner, Southwold; G. A. Winters, W. A. W. Woolner, Toronto; T. W. Walker, Hagersville; E. M. Walker, Toronto; A. L. Webb, Brighton; W. Y. Young, Toronto.

BOOK REVIEWS.

EICHHORST'S PRACTICE OF MEDICINE.

A Text-Book of the Practice of Medicine. By Dr. Herman Eichhorst, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Translated and edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Price per set: Cloth, \$6.00 net. Canadian Agents, J. A. Carveth & Co., Toronto, Ont.

This publication by the eminent German author is a welcome addition to standard literature on medicine. If fitness to satisfactorily perform the task urged upon him by his students and admirers, and if thoroughness and conscientiousness in carrying it out by the author is any guarantee of success, this work cannot fail to be popular with both student and practitioner. A perusal of its pages impresses one that it is the work of a careful, thoughtful clinician, whose experience has been gained from the study of disease at the bedside and in the morgue, and not from the study of literature alone. It impresses one in the same favorable way as the publications of the late Hilton Fagge.

It is also pleasing to note the extremely practical manner in which the various subjects are dealt with and the attention given to the treatment of disease. Such a work will go far to remove, in the eyes of the English speaking world, the stigma of therapeutic nihilism that has long been attached, and not without good reason, to the German School of Internal Medicine. For original research and scientific acumen the Germans deservedly hold a first place in the medical world, and now that they are giving more attention to what after all is the chief end of

our calling—the cure of disease—we may expect rich practical results from that source, of which the work under review is a good omen. Considered from whatever view-point one may choose, from pathology to treatment, Eichhorst's Practice of Medicine is excellent and reflects credit alike on the author, the editor and the publishers.

H. B. A.

Uterine Fibromyomata. Their Pathology, Diagnosis and Treatment.
By E. Stanmore Bishop, F.R.C.S., Eng. Am. Ed., P. Blakiston's
Son & Co., Phil., 1901. Chandler & Massey, Limited, Canadian
Agents.

Many excellent monographs bearing upon the subject of this work have appeared within the last few years. One has but to compare the *technique* and the results of the perfected American Hysteromyomectomy with, for example, the plans of operation adorsed and the mortality rate given in so recent and so good a work as that of Greig Smith to estimate the progress that has been made. It has remained for an English surgeon to sum up for us the net gain, to present in clear, logical and consecutive form the advances made by English, German, French and American Gynæcologists and to seek out and set in order the methods by which uterine fibroids can be most successfully removed.

Very few of those who had the pleasure of hearing Dr. Noble's paper before the Ontario Medical Association last month will be disposed to question the statement that in a vast majority of cases, such tumors should be dealt with surgically. Hemorrhage pressure effects and degenerations, singly or grouped, so seriously threaten the lives of patients with fibroids that the older methods of expectant or paliative treatment should give place to something safer and better. The selection of a plan of attack best suited to the varying conditions under which such tumors are found receives full and fair consideration. We may not all agree with the conclusions reached by the author; this reviewer for instance strongly dissents from his statement that even with a healthy cervix, pan-hysterectomy is preferable to supra vaginal removal, but his facts are well marshalled and his reasoning apparently is without bias. If Mr. Bishop's book is honestly and fairly studied we shall hear less in the future of the disappointing appendage removals popularized by Heger & Tait, and the vaginal-route-for-everything crank will be less in evidence. Per contra we shall have a more just appreciation of the pirolat fact that the dangers inseparable from the removal of fibroids are great or slight according to the method adopted and to the skill and experience of the operator. Does this not mean, in other words, that the surgeon who neglects his opportunities for watching critically the operations of others is likely to purchase his own experience at fearful cost to his patients?

An attractive feature of the volume before us is found in the large number of plates reduced and adapted by permission from Kelley's sumptuous Operative Gynæcology. This is an indication of commendable international courtesy.

N. A. P.

Atlas and Epitome of Labor and Operative Obstetrics. By Dr. O. Shaeffer, of Heidelberg. From the Fifth Revised German Edition. Edited by J. Clifton Edgar, M.D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$2.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

This volume is a recent addition to the well-known series—Saunders' Medical Hand-Atlases—which are popular with the profession as convenient works of reference owing to the excellence of their illustrations. The author does not offer it as a text-book of Obstetrics, nor to replace descriptive works on this branch of medical science and art, but rather to accompany such with graphic representations of the various conditions and operations described. The demonstrator and clinician will find it of great value for its exhaustive classification—though this differs slightly from that adopted by American and English writers, while the student will find the plates and figures valuable for reference in his reading, and the general practitioner when hurriedly seeking information for the management of a difficult case.

The work is divided into Part A, treating of the Act of Parturition considered from the standpoint of the practical obstetrician, and Part B, of Obstetric Operations. There are fourteen lithographic plates of beautiful workmanship, and a series of one hundred and twenty-two figures illustrating in succession every stage in the progress of parturition, and the manipulations required in the various positions and presentations.

A. J. M.

SAUNDERS' HAND ATLAS SERIES.

When we consider how few other than eye specialists use the ophthalmoscope (with any degree of satisfaction) and how important an instrument it is for diagnosis and to know the extent of some diseases even outside of the many affections of the eye itself, such as brain lesions, kidney trouble, and affections of the circulatory system which endanger life, one wonders how few make any effort to become accustomed to its use. Possibly one of the reasons is that but few general practitioners meet with many typical cases to examine at any one time, and until recently atlases of ophthalmoscopic work were not many, and those that were good were of high price. Recently, 1901, a new and enlarged edition of Prof. Dr. O. Haab's work, translated by Dr. G. E. De Schweinitz, has been published by W. B. Saunders & Co. at the very moderate price of \$3. J. A. Carveth & Co. are the Canadian agents.

As the Professor very aptly states, "mere verbal descriptions are even more unsatisfactory than they are in other similarly complicated domains of medicine, especially if the student is imperfectly acquainted

with the subject. Even topographical drawings of pathologic alterations in the eye are extremely complicated and a correct description of the coloring is often extremely difficult or even impossible. Thus a little more white, or a little more red or gray may make an important difference in the appearance of the optic nerve, and may be enough to show the expert that he has to deal with a serious condition, though to the inexperienced eye the appearance may be normal." And he also states, "to supplement one's own observations, and profit by those of others, one must use carefully colored illustrations."

Not only does Prof. Haab give a great number of beautifully colored plates of the eye ground with good descriptions, but also the microscopic changes cleverly drawn and colored.

It is a book well worth the money and should be prized by the surgeon or physician, as it will greatly lighten his labor, and help him in his diagnosis with the ophthalmoscope.

C. TROW.

PUBLISHERS' DEPARTMENT.

A LABORATORY FOR POISONS.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids. Appreciating the importance of the command, "Keep the bowels open," the physician will find in "Laxative Antikamnia & Quinine Tablets" a convenient and reliable aid to nature in her efforts to remove poisonous substances from the body. Attention is particularly called to the therapeutics of this tablet. One of its ingredients acts especially by increasing intestinal secretion, another by increasing the flow of bile, another by stimulating peristaltic action, and still another by its special power to unload the colon.

THE CANADA LANCET

VOL. XXXIV.

TORONTO, AUGUST, 1901.

No. 12.

NORMAL VACCINATION.

By H. R. FRANK, M.D., C.M., Brantford, Ont.

In presenting this paper on Vaccination I must ask you to pardon my digression in places from the order of the programme and to accept my apologies for what, from the nature of the subject, must be largely a simple refreshing of our memories.

When we come to discuss the question of "Normal Vaccination" however, we find that the literature of a few years ago needs some revision. It was then the inoculation of the human subject with the virus of cowpox, plus any other virus, micro organism or contaminating influence that might happen to be present in the beast or subject from which the lymph was taken, followed by a train of symptoms due to any one or many of these influences. To-day when we speak of "Normal Vaccination" we mean the inoculation of the human subject with the "isolated" virus of cowpox, freed from all contaminating influences, and followed by a definite reaction peculiar to the disease. Under favorable circumstances the inoculation of the virus is followed by a period of incubation during which the patient has no experiences other than those attendant upon scarification. At the conclusion of this period we have the appearance of a papular eruption surrounded by a reddish zone; this papule merges into a vesicle, at first fully distended with a clear fluid. In a short time however the centre becomes depressed, and as we see the fluid in the vesicle assume the more opaque appearance of the pustule we find the umbilication more marked, the centre becomes dry, forms a scab which gradually approaches the periphery, until finally it covers the entire pock. As the eruption is passing through these different stages we find the surrounding parts swollen, indurated and painful; the skin displays a well-marked areola of redness and the surrounding glands become swollen and tender to the touch. On the desquamation of the scab we have at first a dusky red scar, which after some months becomes white and pitted. These local manifestations are accompanied by constitutional symptoms of a more or less regular type depending for their degrees of severity upon the constitutional susceptibility of the patient, and the dose and virulence of the lymph. Ordinarily on the appearance of the eruption there is some slight rise in temperature with

more or less lassitude and anorexia. In those most susceptible we may have chills, headache, backache, a more marked rise in temperature and very occasionally in children we have common eruptions, e.g. erythema, roseola, or urticaria.

The discussion of the technique of the operation should require but little attention here as the procedure is familiar to all. The selection of a point of inoculation sometimes gives rise to discussion. In the adult the outer surface of the lesser used arm, at the point of insertion of the deltoid muscle is chosen as being the part most easily put at rest. In infants that portion of the abdominal surface between the anterior superior spine and the rib is said to be a very acceptable spot, inasmuch as there the clothing will give the least trouble and the parts are comparatively at rest.

In preparing the site for inoculation one word of warning in this age of antiseptics should be spoken and that is against the too free use of these same antiseptics ; asepsis should be sought, plain soap and water with a sterilized scarifier to my personal knowledge has improved the results of many physicians who were in the habit of using germicidal soap and carbolic, etc. Remember that we are dealing with an attenuated virus whose sensitive virility we are striving to retain.

The multiplication of the number of points of inoculation is advised by many, and Marson of London, has argued strongly in favor of this but later Welsh of Philadelphia has collected statistics to show that quality and not quantity is the essential feature and after all, gentlemen if we wish to popularize the practise of vaccination we must show some consideration for the feelings of our patients, and it is a lamentable fact that the day has not yet arrived when our young lady friends are proud of the foveated cicatrices following vaccination ; moreover I do not recognize the *rationale* of demanding a number of local manifestations for the essential constitutional condition which is just as thoroughly obtained by one as by a hundred inoculations.

In bringing the virus in contact with the absorbents it is only necessary to abrade the horny layer of the cuticle too great oozing of blood being undesirable. The lymph is quickly applied, rubbed in and allowed to dry for a few moments, when the site of inoculation should be protected by some such means as absorbent cotton and adhesive. After a few hours this should be removed and until the appearance of a vesicle the part requires no attention ; then some soft aseptic material should be applied to the eruption to save it from the clothing. If the parts become painful and swollen, the application of a thoroughly boiled poultice, followed by a liberal smearing of oxide of zinc ointment has given splendid results. During the progress of the symptoms a light diet, aperients and moderate exercise should be advised.

Briefly this is what constitutes a normal vaccination in the vast majority of cases but it should be clearly understood that no hard and fast lines can be drawn between the normal and abnormal vaccination ; the repelling power of the tissues inoculated to extraneous influences and the apparent impossibility of standardizing the virility of the lymph must of necessity lead to some variations in the character of the sequelæ.

At present all must be classed as normal vaccination which do not induce the appearance of any defined lesions other than those attendant upon the disease "cowpox" in its mildest or its severest form.

In comparing the findings of to-day with those of a few years ago the first irregularity we meet is in the period of incubation. The usual time allowed for the appearance of the papule is from three to five days. With the glycerinated lymph, however, I find that in a series of 355 successful vaccinations the average date for the appearance of the papule was between the eighth and ninth days, the earliest being on the fourth and the latest on the fifteenth day. To collect these figures I personally observed 500 cases, 58 of which were primary vaccinations, all of which were successful, and developed the papule on the seventh day (average); of the remaining 442 a number had been vaccinated within the last year and the vast majority of the 145 unsuccessful cases during the last five years. Here I might allude to the doubt that exists in the minds of many as to the virulence of the glycerinated lymph. I think that the result in this series should demonstrate its efficacy; 71 per cent. of successful vaccinations is a very satisfactory result when we consider that the great majority were cases of re-vaccination many within a short period, and the greater number were among school children and men in shops where a personal direction as to the subsequent care of the part was necessarily limited.

To return to the question of the lengthened period of incubation, we must bear in mind that the old lymph "non-glycerinated" owed a great many of its attendant sequelæ to extraneous influences, the explanation that most readily offers itself is that the inflammatory action which we used to get on the 3rd and 4th days was due to the inoculation of these bodies which are invariably found at the seat of inflammatory action, and was not the true reaction following the inoculation of the "isolated" virus. That the presence of these outside influences served to stimulate the activity of the vaccine I have not found inasmuch as the progress of the symptoms, from the appearance of the papule to the formation of the ultimate scab has not been lengthened perceptibly.

Another feature which must be remembered in connection with the irregularity of the appearance of the reaction is the difference in the degrees of the virulence of the samples of lymph used and that this variation in strength should exist is not to be wondered at when we consider what a sensitive body glycerinated lymph is.

In a later paper you no doubt will be told how susceptible it is to the influence of both light and heat and how a thoughtless chemist or physician may expose his stock to either one or the other, the proximity of a register or an open package in a surgery will I am sure account for a great number of not only delayed and weakened reactions but of unsuccessful vaccination.

Following the appearance of the papule we find that the eruption passes through the same stages as described in text books, namely, vesication, with umbilication and marked areola; pustulation and scabbing, and finally desquamation, with the foveated cicatrix. Just here I might warn against the acceptance as a thorough reaction any other than those

presenting these local manifestations and particularly is attention drawn to a spurious variety commonly known as the red raspberry excrescence; it just appears as a red elevation at the site of inoculation, closely resembles the papule of true vaccinia. It does not however progress to vesication, and the thin scab which forms over it, when it falls, leaves the original elevation which usually persists for some weeks.

The complications which can be truly considered as such, of a normal vaccination, are, with our modern lymph, and in the light of the researches of Copeman and others, reduced a very limited number.

Those due to a heightened inflammatory action of the skin are the most frequently met with, and even these can usually be traced to some injury to the pock or the introduction of some infection subsequent to the inoculation; or again there is a history of a pre-existing dyscrasia. For the most part they are not peculiar to vaccination, and are probably, according to Aldrich, "excited by some chemical irritant as distinguished from those which, like erysipelas, are due to micro-organisms". These eruptive troubles are as a rule of short duration and of limited severity, and with the knowledge of a pre disposition or even in the presence of an exanthem we should not hesitate to inoculate when face to face with infection.

Probably the most serious complication is the developement of a generalized vaccinia. This occurs usually about the time the pock at the seat of inoculation has arrived at maturity. The eruption appears in successive crops, and usually assumes the same appearance as the original pock; occasionally however, it so closely resembles the eruption in variola that it is difficult to differentiate. The appearance of the rash, however in generalized vaccinia is earlier than that in variola. The constitutional symptoms are less marked and it is also unusual to find the vaccinal eruption appear on the mucous surfaces. The great apparent difference is that generalized vaccinia is not communicable except by direct inoculation. As to the causes of generalized vaccinia little can be said beyond the marked susceptibility of the patient, auto-inoculation, the presence of general cutaneous eruption or the inhibition of the virus through channels other than the skin.

The most commonly troublesome complication is probably a localized necrosis following the maturity of the pock. The soft parts at the seat of inoculation slough and an ulcer is formed with the well-defined, clear cut edges; this complication can usually be traced to a want of care in the treatment of the arm, the confinement of discharges and the general lack of cleanliness. A thorough removal of the necrosed tissue is rapidly followed by resolution. A few other complications, such as vaccinia gangrenosa, vaccinia hemorrhagica, glandular abscess etc., are reported, but are of such extreme rarity that in a limited paper such as this they cannot be considered.

After observing over 2,000 cases of vaccination during the past 18 months these abnormalities, namely, skin eruptions, generalized vaccinia and localized necrosis were the only ones observed that could be rightly termed complications and they were rare, only one case of generalized vaccinia being reported.

Previous to the extensive investigations of Copeman, Klins and others, a host of infections were classed as complications of vaccinia, but since these men have so clearly shown that the streptococcus of erysipelas, and the bacillus of tubercle, etc. are destroyed by being incorporated with a sterilized solution of pure glycerine and water, without markedly attenuating the virulence of the lymph, there is no reason why a carefully conducted inoculation should be followed by any sequelæ other than those discussed.

The use of the bovine lymph excludes the possibility of syphilitic infection and with the care now exercised in the preparation of the lymph and the selection of the animal, the rigid examination they are subjected to for the discovery of skin lesions or tubercle, the post mortem examination in search of unhealthy organs, and finally the testing of the efficacy of the virus before it leaves the laboratory, puts it almost beyond the realm of possibility that infection should be carried by the lymph.

In something over 1,600 cases I have had the opportunity of watching during the past two months I have yet to see any abnormal sequelæ. It is true reactions were severe in some cases, but it was just in those cases where the tissues were evidently not strong enough to cope with even an attenuated poison.

I am indebted to Dr. Elgin, Supervisor of the Biological Department of Mulford & Company for some valuable information in connection with the production of the modern vaccine, and also for his experiences in the laboratory of individual antagonism to the action of the virus. He tells me that it is a common thing for employees who are constantly subjected to inoculation to develop reactions several times in the same year, until finally as it were a point of saturation is reached when the individual no longer "takes". His experience also shows that the individual is rarely, if ever, always, at all times, immune from the action of vaccine virus, inasmuch as persons may be exposed to inoculation for months and not show reaction, but the time invariably comes when they develop the typical vaccinia.

A CASE OF ADVANCED ARTERIO SCLEROSIS IN A CHILD.*

BY ALLEN BAINES, M. D., C. M.

Associate Professor of Medicine, Lecturer on Pediatrics, Trinity College, Toronto.

The rarity of this condition in early life caused me to bring this case before the Society and to report it as fully as possible. I can find only the cases published by Holt, seven in number, and the case of Brill and Libman† which made me feel that the presentation of this one with specimens and slides would be of interest to the Fellows.

In none of the cases which I have read, can I find that the sclerotic condition existed so generally as in this. In them only certain vessels had undergone change whilst in my case, with the exception of the cerebral vessels, everywhere in the body the changes were found to have taken place. During life in tracing the various superficial arteries, all gave the pipe stem touch and resistance which one generally associates with the calcareous condition of vessels frequently found in old age, and this will be seen to be verified by the specimens.

The etiology of the subject I do not purpose touching on. It is fairly well known and agreed upon, syphilis being probably the most frequent cause of its production amongst the young. Heredity, nephritis, scarlet fever, diphtheria, rheumatism, gout, alcoholic and lead poisoning are the chief factors other than syphilis.

Willie F., aged ten years and six months, born in Toronto, admitted to the Sick Children's Hospital, December 10, 1900.

FAMILY HISTORY.—Father living, healthy mechanic, always strong and healthy, says he was never ill, absolutely denies ever having had any specific disease.

Mother, living and healthy; no illness beyond child bearing; no miscarriages, nor any manifestation of syphilis. Brothers, three, living and healthy. Sisters, two, living and healthy. No signs of vessel change in any of them, or any sign of hereditary syphilis or struma.

PAST HISTORY.—Had measles at seven years of age. For past two years had suffered from chorea, on and off; attacks lasting from two weeks to ten weeks. For several months he has suffered from nocturnal enuresis, always wetting the bed unless he got up to pass urine during the night. Drank water in large quantities, and if he should awake, would get up to take a couple of glasses of water. No history of scarlet fever nor diphtheria. Always been strong and healthy, capable of outdoing most boys of his age at running and games requiring physical activity and endurance. Could get no history of snuffles or rash, his mother reporting him, with the exception of the chorea, as particularly healthy, never having had a suspicion of rheumatism.

*Read before the American Pediatrics Society, Niagara Falls, N. Y., May 27, 28, 29, 1901.

†*Journal of Experimental Medicine*. Vol. iv., Nos. 5 and 6.

PRESENT ILLNESS.—On the evening of December 3, 1900, he complained of severe headache. During the night had eight convulsions and vomited three or four times a watery fluid. The glands on the right side of the neck became swollen. The family physician being sent for, ordered him to bed. On December 5th, his mouth became filled with dark blood clots; antiseptic mouth wash and styptics were ordered. The bleeding being profuse, and not lessening, the doctor ordered his removal to the Sick Children's Hospital on December 10th.

EXAMINATION ON ADMISSION.—Patient pale and anemic, lips bluish-white expression dull, languid and sleepy, fairly well nourished, body and head found in a filthy condition, necessitating several hot baths before being satisfactorily cleansed. Does not look intelligent, face and manner indicating low social status, eyelids puffy breath extremely offensive, pervading the atmosphere of the whole ward. Teeth discolored and much decayed. Right second upper molar sharp and projecting horizontally into the cheek. The mouth full of blood clots which formed every hour or so; this blood appeared to proceed from a cavity in last lower molar and from ulcers on the cheek—four in number. Three of these were of the size of a ten-cent bit, one as large or larger than a twenty-five cent piece. The edges were red, hard and raised, irregular in shape, covered with a yellow slough, which when touched bled freely. The gums blue-red, swollen and everted from the teeth, with a dirty yellow pus oozing between the teeth and gums. Tongue tender and covered with a black hard coat. The filthy condition of the patient, the stench from the mouth and the large unhealthy ulcer suggested *cancrum oris*, but the rapid way in which the patient improved under the administration of pot. chlor. manifested the fact that the condition was *stomatitis ulcerosa*.

December 11th.—Mouth has been kept clean with antiseptic washes, but hemorrhage still continues. I ordered the bleeding points to be touched with solid perchlorid of iron and a small piece was placed in the tooth cavity, which was bleeding freely. This application acted very well, the bleeding ceasing during the afternoon.

December 12th.—Condition of mouth much improved; no bleeding; tongue cleaning at tip; patient very drowsy: temperature 100°; pulse, 110; vessels noticed to be generally hard and resistant to touch.

December 14th.—Marked improvement; urinalysis shows albumin, 8 per cent. bulk, specific gravity 1009; microscopically nothing was noted; pain on deep pressure over right side of the abdomen and back and over kidney; no edema; skin dry and harsh; gums still bleed on slight pressure. A small opening like a tiny white ring was seen on the gum, which probably was the open mouth of an artery, from which most of the hemorrhage proceeded.

December 20th.—Had a severe epistaxis from right nostril, lasting for two hours, controlled finally by a saturated extract of suprarenal capsule plug; ulcers rapidly healing; tongue clean and fetor of breath much improved.

December 25th.—Another severe attack of epistaxis from the left nostril; application of suprarenal capsule extract, soon subdued.

December 27th.—Only one ulcer left on cheek.

December 28th.—A third attack of epistaxis. Careful examination of all the palpable arteries revealed sclerotic condition; the blood current being cut off by pressure, left them as hard, resistant cords, the walls being evidently sclerosed and the stream needing firm pressure to be cut off; heart enlarged, left border being to left of nipple line. This condition of vessel wall readily explained the difficulty of controlling the hemorrhages which had occurred from the mouth and nose.

January 3rd.—Epistaxis occurred; vessel could be plainly seen spurting from right septum.

Urinalysis shows albumin 3 per cent. bulk, specific gravity 1008; microscopic examination negative; has been quiet and drowsy for the past three days; amount of urine passed in twenty-four hours, 29½ ounces.

January 7th.—Has great dyspnea; respiration rapid and labored. Precordial distress—hard cough with pain, especially over liver region; pulse 130, strong and regular; liver extends three inches below costal margin, very tender on pressure; heart, apex displaced downward and outward; impulse diffused but strong; a strong, rough, systolic mitral murmur; veins in neck prominent; *alæ nasi*, dilating.

January 8th.—Easier to-day; abdomen has become tympanitic; pulse, 125.

January 9th.—Bowels have not moved since January 6th, resisting all purgatives and enemas; abdomen still more tympanitic; pulse, 90; temperature, 95°; heart sounds weak.

January 10th.—Gradually weakened during the night; respirations very slow, intervals of five to twenty seconds; died at 10 a.m.

Treatment consisted of antiseptic mouth washes: soda sulphocarbonate solution every hour or two with local applications of solid perchlorid of iron and internally potassium chlorate and muriated tincture of iron for dyspnea; morphia and strychnia were given, and towards the end glonoin and nitrite of amyl.

Prof. Anderson submits the following microscopic report:

Kidneys both presented practically the same condition. The capsule showed marked fibroid thickening and beneath the capsule is an area in which there is great increase of the interstitial tissue, so as almost to replace the parenchyma of the organ. This area is infiltrated with large numbers of small round cells, mostly proliferated connective tissue corpuscles, but some polymorphonuclear leucocytes. Throughout other parts of the sections there is a well marked fibrosis, in some places almost replacing the tubules. Many of the glomeruli show extreme fibroid, hyaline-fibroid, or hyaline change. The vessels of the kidneys show all degrees of sclerosis, with narrowing of their lumina, some of the smaller ones being practically obliterated. Their walls in places present hyaline or hyaline-fibroid changes. There is considerable polymorphonuclear infiltration of the interstitial tissue and glomeruli in all parts of the sections. The epithelium, especially of the convoluted tubules, is swollen, opaque, granular, and often desquamating so as to fill up the tubules. Many of the tubules contain casts, hyaline, granular, or at times, partly

hyaline and partly epithelial. In fact the specimens show the contents of the tubules in various stages of transition from the fairly definite epithelium to partly or completely hyaline material, giving a beautiful illustration of this method of cast formation. The vessels throughout present well marked congestion. Many of the tubules contain polymorphonuclear leucocytes.

The histological examination would indicate an advanced degree of interstitial nephritis with arterial sclerosis and an acute inflammatory condition grafted on top of the chronic process.

The femoral arteries were the only ones submitted for examination. They show well marked sclerosis involving all the coats to some extent, and narrowing the lumina. There is thickening in some places internal to the subendothelial elastic layer. The vasa vasorum in the media and adventitia also present sclerosis, in places almost obliterating them. Around many of the vasa vasorum is a proliferation of connective tissue cells. The inner parts of the tunica adventitia and the tunica media present a more or less hyaline appearance in places, a degeneration possibly resulting from the interference to their nutrition from the morbid changes described in the vasa vasorum.

Report of the post-mortem examination on the body of W. T., aged twelve years, autopsy January 10, 1901, six hours after death. Rigor mortis well marked. The usual post-mortem staining is present. Veins over the upper part of the thorax are prominent. Slight pitting about the ankles from edema. The arteries at the wrist, elbow, in the axilla, neck, thigh, popliteal space, and at the ankle are readily felt and can be rolled beneath the fingers.

THORAX.—Pericardium contains $2\frac{1}{2}$ ounces of slightly turbid fluid; no pericardial adhesions.

The heart weighs $8\frac{1}{2}$ ounces. On the anterior surface of the right ventricle is a rough, reddish, granular patch the size of a twenty-five cent piece, and some similar patches are seen at the base of the great vessels. The coronary arteries show well marked general fibrosis with some patchy areas of atheromatous deposit. The heart muscles is hard and presents extensive areas of fibrosis. The endocardium, especially in the right ventricle, is whitened and thickened. The walls of the left ventricle are markedly thickened from hypertrophy, those of the right ventricle are hypertrophied to a lesser extent. Both auricles appear somewhat enlarged. The valves and orifices present nothing worthy of mention except slight thickening of the margins of the mitral cusps. The ascending and transverse portions of the aortic arch show nothing abnormal; the descending portion shows some scattered, irregular, yellowish patches of atheroma. These patches of atheroma become more numerous and extensive lower down, and in the abdominal aorta are particularly well marked. All the branches of the abdominal aorta stand open on section and show very definite fibrosis; the smaller the vessel the more marked the condition.

Left pleural cavity contains $2\frac{1}{2}$ ounces of straw-colored fluid. No pleural adhesions. Right pleural cavity adhesions of lower lobe to diaphragm, readily broken down. Both lungs crepitant throughout; some hypostatic congestion.

ABDOMEN.—Liver four fingers' breath below the costal margin. Weight 31 ounces; cuts with resistance; slight nutmeg appearance.

SPLEEN.—Enlarged, soft and friable.

KIDNEYS.—Right somewhat lobulated; surface granular; capsule strips off with difficulty; cortex much narrowed; on section the organ is pale and mottled.

Left extremely small and lobulated, capsule adherent, surface granular, cortex extremely narrowed, almost imperceptible in places, a number of small ecchymoses in the pelvis. Ureter and pelvis on left side dilated, not so on the right side.

The other abdominal organs presented nothing calling for special mention.

BRAIN.—Vessels at base and elsewhere are soft and show no sclerosis.

Fibrous tissue throughout the body appears to be increased.

Urine removed post-mortem shows on analysis the following:

Specific gravity 1007, reaction acid, albumin present in large amount.

Microscopic examination shows the presence of numerous hyaline and granular casts; also many epithelial cells and *debris*. The epithelial cells show granular degeneration.

AN ANAESTHETIC CHART.

The following chart arranged by Dr. Charles O'Reilly, of the Toronto General Hospital, has been widely adopted in Hospital practice.

ANÆSTHETIC REQUIREMENTS.

Instruments.

Tongue Forceps.
Mouth Gag.
Tongue Depressor.
Sponge and Holder.
Tracheotomy Tube.
Tracheotomy Knife.
Feathers, for tube.
Hypodermic Syringes.
Oesophageal Forceps.
Davidson Syringe.

Miscellaneous.

Wax Candle and Matches.
Large Fan.
Blocks or Bricks to elevate table.
Conical Jaw Opener.
Battery.

Restoratives.

Liq. Amm. Fort.
Spts. Amm. Arom.
Brandy and Whiskey.
Liq. Strychnin. (dose 5-10 minims.)
Ether.
Tr. Digitalis.
Sol. Green Tea
Amyl. Nitrat. (Pearls.)
Oxygen Gas.
Nitro-glycerine $\frac{1}{10}$ gr.

Miscellaneous.

Towels for Friction.
Hot water Bottles, Cold Water.
Ice, for rectum.
Forced Respiration Apparatus.
Saline Solution, \mathfrak{z} i. to \mathfrak{z} i.

Form to be Filled in Before the Administration of an Anæsthetic.

Name.....Disease.....Age.....Sex.....
 Birthplace.....Occupation.....Ward No.....
 House Surgeon.....Date of Admission.....Date of
 Discharge.....Under care of.....Report taken by.....
 HABITS: Alcohol.....DISEASES: Epilepsy.....
 Opium.....Apoplexy.....
 Cocaine.....Bright's Disease.....
 Other Drugs.....Other Diseases.....

Patients Condition.

Pulse before.....during.....after.....Circulation.....
 Heart.....Lungs.....Nervous System.....
 Urinary Analysis—Sp. Gr.....Albumen.....
 Reaction.....Sugar.....
 Anæsthetic commenced at.....Discontinued at.....
 Anæsthetic used.....Amount used.....
 State of Stomach during operation.....
 Return to consciousness at.....
 Date.....Administrator.....M.D.

*General Remarks:***THE BROMIDE SLEEP.**

DR. ARTHUR A. SMALL, B.A., M. II., L.R.C.P., M.R.C.S., Toronto.

That it is perhaps possible by means of acute bromidism to quickly and permanently obliterate the desire for morphine, chloral, cocaine, or alcohol without the usual subsequent suffering and without creating another drug habit in cases where these drugs have been taken for several years in larger than medicinal doses, is I think sufficient excuse if one be required for the production of the Bromide Sleep.

This treatment was first described and used by Neil MacLeod of Shanghai, who now reports nine cases. I will read a short report of his treatment of the first of these cases in which the Bromide Sleep was produced by mistake. "In 1889 a married women aged 25 suffering from neuralgia for which she received hypodermic injections of morphine, the habit being continued without break until May 1896 in spite of several attempts to withdraw the drug slowly: on May 17th I ordered her a 12 ounce bottle containing 12 drachms of sodium bromide, a half ounce of the mixture to be taken every four hours: on May 18th she was drowsy, and on May 19th I found her so soundly asleep that I could not wake her. The pulse, temperature, respiration and skin were normal. The whole bottle and half of a second one had been given. For four days no intellectual, emotional or volitional effort was observed and only a little milk was swallowed daily. The patient could not stand or sit, muttered in an-

swer to questions and passed urine and stools in bed. Then followed a period of restlessness, and intellectual and emotional confusion, during which time she asked for nothing and muttered incoherently. Speech at first like other movements was greatly enfeebled and not co-ordinated, gradually however, becoming stronger and more distinct; delusions and illusions of sight at first numerous, slowly disappeared and were not noticed after June 7th. She left Hospital on June 17th feeling quite well. To her own astonishment and that of her sisters she had no desire for morphine from the time she entered the Hospital, and I am glad to say it has not yet returned."

By the Bromide Sleep is meant a condition lasting from five to nine days, in which the subject sleeps day and night and from which he cannot be roused. He will pass urine and stools in bed if left to himself but can be prevented by being placed on a commode and held there for a few minutes every six hours. Following this sleep is a gradual recovery of the powers of locomotion, speech and thought, the progress being daily visible. With perseverance, care and the administration of a tumblerful of milk every two hours, little loss of weight need occur except of wasting of muscles. After recovery in no instance has any indication of interference with nervous functions been observed.

The best method of giving the bromide is probably yet to be worked out, but so far MacLeod says "I am inclined to give only in the day time." Having taken the weight of the patient and ascertained that there is nothing to contra-indicate the treatment in the way of organic disease, the sodium bromide may be given in two drachm doses in a half tumbler of water every two hours until an ounce is given the first day; the second day a similar amount is given in the same way: if this dose does not suffice it may be repeated on the third day. It must however be remembered that the full effect of the drug is not manifest for at least twenty-four hours after the administration of the last dose. The following advantages over other methods of treatment can be claimed for the Bromide Sleep:

1. It does away with the suffering entailed by stopping the drug.
2. The patient cannot bribe the attendants nor can he deceive his physician for he is powerless.
3. No taste is likely to arise for bromide given in this way.

The case of my own which I wish to report is of interest chiefly because of the negative result (as regards sleep) which the very large doses of bromide had on the patient. The case was one of alcoholic habit of many years standing in a man forty years of age who at the time of consultation was in a highly nervous and excitable condition and had for many days been suffering from insomnia.

The first day of treatment he was given nine drachms of sodium bromide in two drachm doses for the first four doses and one drachm at 10 P. M. The second day he was given eight drachms of the salt. He slept during the night but was easily awakened. The third day he was given ten drachms, and the fourth day eight drachms. During the afternoon of the fourth day he was somewhat drowsy and slept very well, during the night of the fifth day he had three drachms of the salt, which

was the last dose given: thus in five days he had taken six drachms and four ounces of sodium bromide. By the afternoon of the fifth day all drowsiness had disappeared and in order to insure a good nights sleep he was given fifteen grains of sulphonal. I might add that the bromide was given in soda water and did not seem to cause the slightest gastric disturbance.

Although the bromide in this case did not cause the deep sleep described by MacLeod (which however he says may not be necessary in order to effect a cure), nevertheless it gave what might be described as a normal sleep, which he certainly had not had for many days. I might add that during the treatment the patient's temperature was sub-normal, varying between 96.2 and 98° Fahr. and I may also say that so far the alcoholic craving has not returned, but how long that will last time only can tell.

A PECULIAR CASE OF MASTOIDITIS.

By CHAS. TROW, M.D., Toronto.

A male patient æt 58 (but looking much older) some months ago gave a history of catching cold in the head, and the hearing becoming dull he went to a druggist who gave him some "ear oil" and told him to syringe out his ears. He came to me two weeks after the first symptoms with ceruminous plugs in both ears, and after I removed them I found both drums perforated and a considerable amount of pus discharging from the middle ears.

He also had a chronic hypertrophic nasal catarrh, and a chronic suppurative dacryocystitis in the right eye. Within a month he says both ears got well and no discharge; but then he sat by an open window in the draught and caught cold, and when he came to me again, the left ear was standing out from head with a large swelling behind it. I ordered an ice bag applied for a few days and then pus was felt on examination, and as he refused to go to the hospital I made an incision into the soft tissues and drained it out. The swelling went down and the skin healed, but in a few days more the tissues became swollen again and I insisted on a mastoid operation which was performed in the hospital under chloroform, chiselling and scraping out all the diseased bone in the mastoid. The wound was freely sprinkled with iodoform and packed with iodoform gauze. Two days later the patient became insane and the next day persuaded his friends to take him out of the hospital. At his home I dressed the wound and ear, particularly cleansing away all the iodoform thinking possibly it might have caused the mental aberration, and used boracic acid and acetanilid instead. A physician and a surgeon were called in consultation and we all came to the conclusion that the brain lesion was due to senile decay. The patient had been a very steady hard indoor worker never taking a holiday, and looked twenty years older than the age given. However in about six weeks the mental trouble got quite well under tonic treatment, close watching and good nursing. The mastoid and middle ear were healed and well within three weeks from the operation. There had been no pain or rise of temperature or bad symptoms about the ear after the operations; but still the ear lesion seems to have been the cause of the brain trouble.

THE PRIMARY TREATMENT OF BURNS AND SCALDS.*

By H. A. BRUCE, F.R.C.S. Eng. Toronto.

When the president of this association asked me to read a paper on this subject I readily acquiesced, thinking it would be a very easy matter to deal with, and would entail no great amount of labor. The very simplicity of the subject, however, makes it very much more difficult to me to give you anything that you do not already know, but I hope that the discussion which will be participated in by those who have had large experience in treating burns, will bring out many practical points which will be of real service to the members. In looking over the literature of this subject I have been impressed with the number of remedies recommended, each having advocates and each giving very satisfactory results, if you are to believe in every instance the favorable reports of admirers, and possibly discoverers. This is, I take it, an evidence that we have as yet no one drug which is universally accepted as a specific. We must, therefore, aim at formulating certain principles of treatment, the carrying out of which will probably be equally well done by more than one remedy. In the first place, we must remember that the constitutional condition requires active treatment, as well as the local injury. The general treatment will depend largely upon the extent of the burn. When our patient is suffering from severe shock our first duty will be to apply suitable remedies for that condition. Warmth is of the greatest importance, and the patient should be wrapped up in warm blankets, he should be put to bed as quickly as possible, without a pillow, and the foot of the bed should be raised six or eight inches. Free stimulation is also important; perhaps the most rapid stimulant is ether injected subcutaneously in doses of from 20 to 30 minims. If, in injecting ether, the needle of the syringe be buried in the muscle, it will avoid the sloughing of the skin, which sometimes occurs after ether is used subcutaneously. This may be repeated every fifteen minutes if necessary, and brandy may be injected in the same quantity, still more frequently; strychnine is also useful.

Stimulants should also be administered, preferable in the form of a hot nutrient enema, containing half an ounce to two ounces of brandy with the yolk of an egg and an ounce of beef tea and milk. In severe shock an injection of hot normal saline solution into the rectum will be found of very great value. One or two pints may be given and repeated every two or three hours, until the pulse is of good volume. The advantage of this plan of giving salt solution over the transfusion into a vein is that the dilution of the blood does not occur so rapidly and hence there is not the same trouble about dyspnea. A very marked effect will be noticed in the pulse in a few hours after the injection.

When a nutrient enema has been administered, it is well to wait an hour before using the saline solution. I think there can be no doubt

* Reprinted from *The Railway Surgeon* of July 25, 1899.

that the shock is often to a large extent kept up by pain (which causes exhaustion of the nervous system) and it is therefore of importance to relieve this, if possible. An injection of morphine, preferable in combination with atropine, should therefore be given. If after the patient recovers from the shock symptoms of internal congestion or inflammation set in, the usual treatment for this condition will be necessary. During the stages of the sloughing and convalescence it will be necessary to support the patient's strength by a nutritious diet with plenty of milk and the use of stimulants and tonics. When the body is extensively but superficially burnt the depression is removed and the pain relieved by placing the patient in a warm bath. Visceral complications are usually of a congestive type, and for these we must rely chiefly on stimulants. Frequent full doses of opium will be required to relieve the irritability of the nervous system.

Now, as to the local treatment. This will depend upon the degree, and we will adhere to the classic division into six degrees, as originally proposed by Dupuytren. The treatment may be considered under four heads, viz., the treatment of the first degree, that of the second, that of the third and fourth degrees, and, lastly that of the fifth and sixth degrees.

In the first degree there is no breach of continuity, and therefore no danger of sepsis. Dusting the surface with any soft, simple powder relieves the pain by protecting the surface from contact with the air. Cold cream or glycerine or lead and opium lotion will also be found efficacious.

In the second degree, where blisters have formed, the cuticle should be washed antiseptically and then the blisters punctured and the fluid allowed to escape, but the epidermis should not be removed. The opening in the blister should only be of sufficient size to allow the fluid to escape; otherwise, if made too large, the epidermis is apt to peel off, exposing the papillary layer of the skin and causing a great deal of pain and retarding the healing. The area may then be covered with some antiseptic ointment, eucalyptus ointment of the B. P., or boric acid ointment (half strength) will do very well. This should be covered over with cotton wool and left for three or four days, when the part will have quite recovered.

The third and fourth degrees: When there is partial or entire destruction of the whole thickness of the skin or of the deeper tissues, as in the remaining degrees of burn, the parts must be kept aseptic, because after recovery from shock and for the first week or two afterward the patient's greatest risks are connected with sepsis.

We must now consider the best method of securing asepsis—a very difficult problem on account of the readiness with which burnt parts absorb fluids, and especially carbolic acid. One should not use carbolic acid as a disinfectant in burns on account of the danger of poisoning. The most suitable substance is bichloride of mercury, which may be used in the strength of 1 in 1,000 without any danger of absorption. By using plenty of soap to the skin in conjunction with a sublimate solution of the strength of 1 in 1,000, rapid disinfection of the skin is effected. In burns

the heat has to a certain extent disinfected the part, should there be no further soiling, and it is not necessary to use disinfectants as thoroughly as in preparing the skin for an operation. This is especially true when the burnt part has not been covered with clothes.

More care in the disinfection of the part will be necessary when covered with clothes. It may be necessary and advisable to administer a general anesthetic—preferably ether—so as to thoroughly cleanse the part without increasing the shock; so that in bad cases the procedure will be as follows:—Put the patient under an anesthetic, soap and wash the burnt area and the skin around, douche it over thoroughly with 1 in 1000 sublimate solution which is subsequently removed by douching with boiled water. The best dressing then is cyanide gauze wrung out of 1 in 6 or 8000 sublimate solution and over this salicylic wool.

This may be left on for three or four days or even a week without changing, providing there be no evidence of sepsis as indicated by rise of temperature, etc. The great advantage of a dressing of this kind is that while it keeps the part aseptic it also allows the discharge to dry on the surface. When the slough begins to separate and granulations are springing up, one of the antiseptic ointments will answer better than the cyanide dressings. Eucalyptus or the full strength boracic acid ointment does very well. When the slough has separated the wound must be treated as a healing ulcer. Lately, French authorities have recommended the use of picric acid as a dressing in burns where the cutis vera has not been entirely destroyed; it is claimed for it that it is more efficacious in allaying the intense pain (so often present), than the ordinary applications, while at the same time it possesses antiseptic properties. The vesicles are punctured and then a piece of lint soaked in a saturated solution of picric acid is applied and over this a pad of salicylic wool is firmly bandaged. The effect of the acid is to coagulate the albuminous fluid oozing from the wound and thus to form a protective layer over the exposed nerve endings of the skin. The application may be left undisturbed for two or three days and then soaked off with warm boric lotion and reapplied. In several cases in which this procedure has been used, we have been very pleased with the result. I think, however, it is most useful in the milder degrees of burns.

Just a word in reference to certain applications commonly recommended. Carron oil, for example, is a dirty preparation and responsible for a great deal of mortality after burns. The use of poultices of water dressings and dusting with flour are equally bad. As far as possible, the wound should be treated aseptically. If the attempt at disinfection fails and the wound becomes septic, probably the best method of treatment is the continuous water bath. If the trunk be affected and the burn large and painful and accompanied by constitutional disturbance, the patient is placed in a bath of water at the temperature of 100° F. containing a small quantity of an antiseptic, such as Condy's Fluid or Sanitas, and changed every three or four hours. It is well to take the patient out of the bath at night and apply wet boric lint, covered with a mackintosh (previously rendered aseptic. This method should be continued until the sloughs have separated and the inflammation has subsided. Now antiseptic ointments ap-

plied as for healing ulcers should be substituted. Where the extremities are effected special baths for the part may be used. Where the slough is situated over a joint or a serous cavity, and there is danger of either being opened when the slough separates, very great care must be taken in the aseptic management of the case, lest the part become septic and acute suppuration of the articular or serous cavity supervene.

The fifth and sixth degrees: The treatment of these has to be considered in regard to the extremities alone; if the burn be situated elsewhere the patient usually dies at once. Should, however, either of these degrees of burns be upon the skull or trunk, and the patient live, we must endeavor to keep the part aseptic and support the patient's strength and wait until the slough separates; then, if no vital part be involved, the defect will be gradually filled in with granulations and eventually skin grafting will expedite a cure. In the case of extremities, however, when the tissues down to and including the bone are completely charred, or when only the fifth degree is reached, and the tissues are destroyed over a large area, the question of primary amputation arises. Where the limb is hopelessly destroyed there can be no question as to amputation, the only point to be considered is where and when the amputation should be performed. Generally, speaking, it is better to wait until the shock has passed off, for if we operate before this the shock is apt to be increased, bringing about a fatal result. If the part be roughly disinfected and wrapped up in an antiseptic dressing it is usually quite safe to wait twelve or twenty-four hours till the shock is partly recovered from, and then by employing all the measures calculated to minimize shock, amputation may be proceeded with. As regards the seat of amputation, it is not necessary to go far above the charred tissue; certainly not above the region of the erythema.

It might be well for me just to mention some other applications used in the treatment of burns. Tillmans prefers aseptic dry powdered dressings to ointments or solutions. McInnis states that spirits of turpentine, applied to a burn of either the first or second or third degree, almost at once relieves the pain, while the burn heals. After wrapping a thin layer of absorbent cotton over the burn the cotton is saturated with turpentine and covered with bandages. Being volatile, the turpentine evaporates and it is therefore necessary to keep the cotton moistened with it. When there are large vesicles these are opened on the second or third day.

Acetanilid is also used. Ichthyol, in watery solutions, or in glycerine, or even in ointment form, and the iodine derivatives, such as iodoform, aristol, euophen, iodoform, airol, are reliable measures; also thiol.

In cases where shreds of clothing have been burned into the skin they should not be removed until the second dressing. Their immediate removal can only be accomplished by stripping away the flesh. While mentioning some of the many remedies useful in the treatment of burns I have tried to outline the treatment which I have seen most successful. Where we have to select some special remedy to be used by those laymen giving first aid in the case of burns, I think the best remedy we have is picric acid. I would advocate, therefore, the placing of a quan-

tity of picric acid on every train and in every station, with printed directions that in the event of a burn or scald a solution be made in water and this applied to the part, and lint or absorbent cotton, if procurable, soaked with it and made to cover the part. Turpentine is also a very good remedy to be used by the laity. In using either of these substances the part is not rendered more difficult of being made aseptic, whereas in the oily preparations it is very difficult afterward to render the parts aseptic.

TREATMENT OF NEURASTHENIA.*

C. C. Hersman has decided that rest is one of the best medicines for neurasthenia. Electricity and massage are particularly good with those who are put to bed. For those taking the rest-cure the hot bath at bed-time is one of the best possible things. In treating neurasthenia one of the first and most important steps is to gain the confidence of the patient.

Douglas Graham thinks it is generally conceded that electricity can be left off in neurasthenia. As to the massage, it depends, of course, upon how it is done. It is almost sure to produce sound sleep if properly given in the evening to neurasthenics who have been wakeful. But if neurasthenic patients who sleep well without massage are massaged in the evening they are sure to be wakeful after it, and they do not feel the loss of sleep next day; they have gained something after all.

D. R. Brower thinks that, neurasthenia being pathological fatigue, the first indication for treatment must be rest, mental and physical.

A partial rest is all the great majority require, and the amount must be carefully determined in each case. It is usually sufficient to have them retire early, get up late, and take one or more hours of rest at noon. This rest at noon should be in a quiet darkened room, should be absolute, with as perfect a condition of muscular relaxation as possible.

Equally important with rest is the dietetic management. The diet should be largely nitrogenous, and, in order to promote its digestion and assimilation, sugar and sugar-producing articles should be used in the smallest possible amounts. Beef, mutton and eggs should furnish the basis of the dietary, with milk when it agrees; and if sugar is cut off these foods are more perfectly elaborated. The predigested foods are of great benefit, special preference being given to malted milk and somatose, a teaspoonful of the latter being ordered with a cupful of the malted milk, and this in the absolute-rest cases may be given every two hours; in the partial-rest, cases between each meal and at bed-time.

Coffee and tea are beneficial in many cases, excepting those who have the excessive use of these articles as a part of their etiology. Excessive use of either of them aids in prolonging and promoting neurasthenia, but in moderation they are both conservative to the general nutrition.

Electricity is the third indication. In the absolute-rest cases general faradism is necessary, and in the beginning of the treatment it should

* From Sajou's Cyclopædia..

be very gently applied and to the extremities only ; later, to the whole body, using currents that can just be felt. The bed cases should also receive galvanism, first to the head, using a descending current with large electrodes of from 1 to 3 milliamperes ; then to the cervical sympathetic, using from 3 to 5 milliamperes, and then to the spine and abdominal sympathetic, with a large negative electrode at the epigastrium and a smaller one over the spine and a current of from 5 to 10 milliamperes. These séances should be given daily.

The partial-rest cases who come to the office should have static electricity. It may be used by insulation with the primary current, and by sparks from the spine and abdomen with the secondary current for fifteen or twenty minutes daily.

Hydrotherapy is the fourth indication. Sponge-baths are a necessary part of the Weir Mitchell treatment, but in addition they should have the wet pack daily, beginning with a temperature of about 70° F., and gradually lowering to 50° F., prolonged for about one hour.

For the partial-rest cases the dripping sheet is used, the water being about 70° F., and the friction with the sheet made vigorous, the whole rapidly done. The shower-bath, beginning with moderately warm water and gradually cooling it, is of much service in many cases. The hot air bath, like the wet pack, will promote elimination and often overcome insomnia. Cabinets for this purpose are now readily accessible at a reasonable price.

Massage is the next indication, and is required in all the absolute-rest cases. It should be given by the nurse. It should be given very gently in the beginning, the movement being limited to the gentle and superficial ones, and little by little the force, vigor and extent of the treatments should be increased. The partial-rest cases sometimes need massage and sometimes do not. If the effect of the massage is sedative, it will do good ; if, on the contrary, it is exciting or irritating, it may do harm. As the case progresses toward recovery, physical exercise becomes necessary. The Swedish movements may be added to the massage ; light calisthenics may be provided, and such out-door exercises as golfing. This is one of the very best out-door exercises of to-day for the convalescent cases, and indeed, for many of the mild cases from the beginning. The reasonable use of the bicycle is of much use to many. Horseback-riding is a very valuable out-door exercise. Change of scene is often of advantage, but much travelling is injurious.

The climate selected should be one with a moderate mountain elevation, 1500 to 2000 feet, and one not too dry. Ideal places are to be found in the Allegheny Mountains, especially in the mountains of North Carolina—the country round about Asheville, and even better, the country north of Asheville, with Linville as its centre.

The sanitarium, for a short time, is a good place for some patients.

In the drug treatment of neurasthenia the first important class is those which promote elimination. The aloetic laxatives most frequently used are the Lady Webster dinner-pill, or the pill of aloin, strychnine, ipecacuanha, and belladonna. Occasionally a calomel purge is beneficial. Many of these cases require colonic flushings with the normal saline

solution administered in the knee-breast position. Such flushings may be administered in the majority of the constipation cases once or twice a week. Renal deficiency very often demands diuretics, of which the effervescing potassium citrate is the most efficient. All neurasthenics are greatly benefitted by the imbibition of a large amount of water.

For the nervousness the bromides are invaluable, sodium bromide being preferred, especially when combined with the fluid extract of *adonis vernalis*, in from 1- to 5-minim doses. Hypnotics are rarely to be administered. The bromides during the day, the hot-air bath or the hot pack at night, with some easily digestible food at night will almost invariably secure all the sleep that is necessary. Bland's mass, combined with small doses of the extract of *nux vomica* and arsenous acid, makes the best hæmatinic combination. Cases that are not improved often require alteratives in addition, and the chloride of gold and sodium, combined with the pulverized resin *guaiaci*, a combination that prevents the decomposition of the gold salt, given before meals, a half or three quarters of an hour, is the best alterative combination in personal experience. Occasionally small doses of corrosive chloride of mercury answers next in preference as an alterative. Phosphorus, as the zinc phosphide, or the syrup of the hypophosphites (U.S.P.), is of service in some cases, and the animal extracts containing phosphorus in a readily assimilable form may be used with advantage. The mineral acids in some of the dyspeptic cases, for temporary use, are of service. Quinine, unless there be a malarial element present, and strychnine increase the nervousness and do not benefit, except in exceptional cases, general nutrition.

No matter what special line of treatment may be adopted, it is very important to keep the patient busy in his efforts at cure, and a daily schedule of therapeutic work should be furnished to him.

F. Savary Pearce says it is in dealing with convalescents from neurasthenia, with incipient cases, or with those in danger of a recurrence, that the climatology of neurasthenia is especially important.

It is almost axiomatic that an altitude of over 2,000 feet is unsuitable for the neurasthenically-disposed or convalescent patient. A very "stimulating" climate should be avoided. Other conditions to be avoided are as follows: Districts menaced by high winds, and frequent fogs; cloudy, saturated atmospheres with but slight movements of air-currents; low country (sea-level) with continuous, non-varying, although moderate, heat, as where the effect of the gulf-stream is strongly felt. Thus the Bermuda Islands and Florida are enervating localities.

Ideal conditions for the neurasthenic include sea-air in a well-wooded country, far enough from the coast to avoid its fogs. A sea-voyage is, as a rule, an excellent preliminary to other climatic measures. Provided the voyage is not stormy, it acts both psychically and physically in soothing the nervous system.

In order to obtain the full benefit of correct climatic conditions the patient must have good food. Without this important adjunct the desirable climatic change may be entirely defeated in its effect on the patient.

MEDICAL ASPECTS OF CANCER OF THE BREAST.*

BY WILLIAM OSLER, M. D., BALTIMORE, MD.,

Professor of medicine in Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, etc.

Surgery has become largely the practice of medicine, and medicine, in part, at least, the preliminary practice of surgery, in so far as making the diagnosis for surgeons and handing them our cases for operation. We consulting physicians see a cancer of the breast in two stages, because the patients come to us as the lesser of two evils; they prefer the opinion of the physician who may possibly tell them that an operation is not necessary, to that of the surgeon, whom they fear will surely tell them that an operation is necessary. I see every year three or four cases of cancer of the breast in its early stage, or cases of suspected breast tumor. But the cases to which I wish to call attention this evening form a more important group for the physician to recognize—namely, the *late manifestation of cancer of the breast*.

Now, they may be grouped according to the metastases, for it is through these that we are brought into relations with them, into *cerebro-spinal, thoracic and abdominal groups*,

We will first consider the *cerebro-spinal group*. Owing to the fact that the metastases are almost as frequent in the bones as in any other part of the body, we see a proportionately large number of cases with symptoms pointing either to disease in the cranium, the spinal canal or the vertebræ. That point has not been sufficiently brought out, certainly not by medical writers. Statistics are available now from several of the large German clinics, and the percentage is considerable.

The first case that called my attention to the matter was a remarkable one that illustrates the *cerebral form of metastasis* following breast cancer. Many years ago I was asked to see a case with Dr. Agnew, in Philadelphia. The woman suffered with headache, vomiting, and progressive coma. She had a double optic neuritis, and it was quite evident that she had a brain tumor. It was not until I saw her the second time that Dr. Agnew remarked: "Why, I forgot altogether that Mrs. R. had cancer of the breast eighteen years ago." On examination, there was a hard, firm, scirrhus nodule in the breast. That case is paralleled by many in the literature, and illustrates, too, the fact that often years after a malignant disease has apparently atrophied a secondary growth may occur. It is the only case, however, out of quite a long series I have had, showing pronounced cerebral symptoms.

The *spinal group* is very much more important, and really forms a very considerable number of all the cases of late metastases in carcinoma of the breast. They are important, in the first place, because they are very apt, indeed, to be mistaken for something else. The metastases may occur in the body of the spine or within the spinal membranes; and a very small new growth, as in a case recently seen in the Hopkins, may cause very serious symptoms. I saw a very remarkable case a few years ago with Dr. Pole which interested me extremely, as we had made an error in the diagnosis. The patient had a marked neuralgia of the neck

* From *The Virginia Medical Semi-Monthly*.

and arm and held her head in a peculiar position, always a little obliquely. On the first visit, I did not recognize the condition, but thought it an ordinary cerebro-brachial neuralgia. On the second visit I examined both breasts, and found a well marked scirrhus tumor in the left one.

But the cases that are of most interest for the physician are those described by Charcot, under the name of *paraplegia dolorosa*—an excellent name. The onset of these spinal symptoms may be early, within a few months after detection of the cancer, or may be delayed for months or years; or, on the other hand, they may occur long before the tumor is recognized. The patient and the physician may not know of the existence of the tumors. An instance of that kind occurred at the Johns Hopkins Hospital in 1894, when a man was brought into Ward C from Union Station, having become completely paraplegic on his way up from Florida. He had had curious symptoms of numbness in the hands and feet, accompanied by burning pains, and his physician, who lived in Massachusetts, had been sent for to bring him home. By the time he had reached Baltimore he had become so ill that it was decided to bring him to the hospital. He was stripped for examination, and as he stood up it was quite evident that one breast was very much larger than the other. The patient himself had never noticed this, but palpation showed a firm, hard, indurated tumor.

With the existence of the primary tumor of the breast the painful progressive paraplegia was easily and readily explained. The difficulty in these cases arises from the fact that weeks and months often intervene between the onset of the pain and the development of the paraplegia, and that pain, and pain alone, is the feature presented by the case for many months.

Dr. Thayer may tell us of a case of that kind which he saw last year. Two years, I think, following operation on the breast the patient began to have these pains. She was a nervous, hysterical individual, and these pains were regarded for a time, at any rate, as probably functional, and due to her neurotic condition. I saw her first with Dr. Atkinson, and it was not possible then to say what was the trouble. There were no signs of local recurrences, although the conditions was suggestive. Three weeks ago, when I saw her again with Dr. Atkinson, she had the well characterized features of *paraplegia dolorosa*. These cases are exceedingly trying, because one is in doubt whether he has to deal simply with pains of a neurasthenic patient, and dreads to give morphia; yet the pains become progressively worse, and he has to give morphia ultimately in large doses while he has the feeling, as I have had in some cases, that the patient should have had the morphia, and plenty of it, very much earlier.

The early symptoms usually are not associated with a scar. They are usually distinct pains, a feeling tingling and numbness, neuralgia of great intensity, and shooting pains down the front or back of the legs, then a slight paraplegia followed by complete paraplegia; but long before this last you have the characteristic retraction of the legs, associated with severe pain. The degree of suffering is probably as great as that seen in any other condition in medical practice. Now, remember that all this may occur without the slightest sign of a secondary tumor.

A patient died in the Hopkins a few months ago who had these agonizing pains with paraplegia, but no definite tumor, no kyphosis, and as a rule, you find no evidence of tumor masses in the spinal column, but must except as the signs of tumor—rather the signs of pressure upon the nerve roots as they emerge from the spinal cord. In the case referred to it was found at autopsy that the tumor growing from the membranes and pressing upon the cord was no larger than a walnut.

The spinal list is the longest of the cases I have seen, and in scarcely one of my long series was the condition recognized in the early stage. What I wish to emphasize particularly about these cases is that they are, so far as we know, utterly hopeless cases; and just as you can reach a diagnosis, give the patient all the comfort and aid that medicine can offer, and you need not blame yourselves for making them morphine habitues. It gives them relief for a time, but you cannot cure them.

The thoracic group is next in importance, and naturally owing to the close relation and the liability to involvement of the lymphatics, that group of cases is fairly numerous. Metastases may occur in the pleura, in the mediastinum or in the lungs. Cases in the pleura are common. There is usually an invasion of the pleural membrane, and effusion. The patient comes with symptoms of pleural exudate requiring tapping, and you may be surprised to find a bloody fluid and the necessity for tapping. These patients may die with little or no distress other than that associated with dyspnoea. The pulmonary cases are exceedingly rare. I have seen autopsies showing such things, but do not remember at the moment a clinical case of the kind. Involvement of the mediastinal gland is, next to that of the spine, the condition with perhaps the greatest degree of distress; and when a year or a few months following the removal of a breast cancer the patient begins to have a cough or dyspnoea without signs of effusion in either pleura, then you know, even if the glands above the clavicle are not enlarged, that one of the worst accidents has happened. Those cases, as a rule, are very, very distressing, and die of suffocation. There is increasing pain, dyspnoea and pulmonary oedema, and fortunately the duration of the illness is shorter than in the spinal cases.

The abdominal group comes next; and first in that we have the *hepatic* cases. Metastases of the liver are perhaps the most common if you take into consideration a large series of cases. Large nodular masses can usually be felt or seen, and death is rapid without much pain.

I want, in conclusion, to draw attention to a very remarkable circumstance in connection with the secondary tumors following breast cancer. You know it occasionally happens, as in the case of Dr. Agnew's, which I mentioned, that the tumor of the breast ceases to grow, the fibrous tissue predominates, and the growth becomes a firm, hard, cancerous, mass, shrinking to perhaps a third of its original size. It is one of the special characteristics of a scirrhus tumor that it not only tends to increase, but that it tends to heal to a certain measure just as tuberculosis does. If you look at the central portion of a nodule of the liver, it is firm, hard, and has undergone changes that are really conservative, and on the road to a healing. In a few of these instances of a secondary growth, one sees remarkable changes that are almost curative; at any rate, they proceed to such a degree that the tumors themselves disappear,

and what is more important, the symptoms they cause disappear and the patient, who was in an apparently hopeless condition, recovers; he gets up, and our grave prognosis was apparently a false one. A number of such cases are on record, and if you should look through both volumes of the *Index Catalogue of the Surgeon General's Library*, you will find some interesting reading on this subject. A few cases are given there in which the secondary tumors have disappeared entirely.

Two cases of interest in this line have come under my observation. Four years ago last September, a young woman came from Pennsylvania to consult me about a lump in her breast. I sent her to Dr. Halsted, who in November removed a very large tumor, which had already involved the axilla in the right arm so that part of the vein had to be removed. It was an extensive growth, and there was no doubt about its cancerous nature. She did very well, and was soon able to be about, although Dr. Halsted had given a very unfavorable prognosis. Two years ago she came to me again complaining of pain in the side and a loss of vision in one eye. I was sick at the time, and unable to examine her carefully, and as her father was then under the care of Dr. DeSchweinitz for a diabetic cataract, I asked her to see him. The Doctor sent word back by special delivery letter that the patient had a sarcoma of the choroid. He did not know about the breast tumor that had been removed, but said that "it is a secondary growth, of course, in the choroid, the first I have ever seen, and the twenty-second on record." All that winter she seemed to get worse, and in June, before I went away for my vacation, I went up to see her, and bid her good-bye. She was then in a very bad condition with secondary tumors in the other breast, nodules in the liver, loss of power in the legs, and was suffering a very great deal of pain. She was given considerable morphia, and during the fall began to improve, so that to my astonishment when I returned I found her not only alive, but rapidly improving, and she has continued to improve. A year later the tumor nodule in the breast had disappeared; and she had regained the power of walking, and what seems more remarkable, she was regaining vision in the affected eye. I see Dr. Randolph shaking his head, and I know it is wonderful, but it is not the only remarkable thing in this case. She still has some pain in walking and has a slight kyphosis about the fourth dorsal, and though she still has to take a great deal of morphia, she gets about, and recently drove two miles to the station to meet me.

Now, a still more remarkable case you may see walking about Baltimore to-day. It must be about four years ago that a young woman came to me with a tumor of the breast, and I sent her to Dr. Tiffany, who removed the cancer. About this time last year she began to have the girdle pains, pains down the legs, and became completely paraplegic. Dr. Lockwood and Dr. Tiffany for a time expected her death any day or hour, but she gradually improved, went to the country, and about four months ago she walked from Union Station to my office. She has some secondary nodules, a stiff back, and has to take a certain amount of morphia, but she is able to be about and attend card parties and other entertainments for her enjoyment.

Now, those are cases for which you could not do better with treatment by Christian Science or at St. Ann's or Lourdes.

DIAGNOSIS AND TREATMENT OF INTUSSUSCEPTION.*

Charles P. B. Clubbe (*The British Med. Jour.*) speaks of the importance of an early diagnosis in these cases in children. During the last seven years, out of 49 children treated for this complication, 45 were operated upon, of whom 21 died. In the successful cases the delay between the onset of the trouble and the time of operation averaged only twenty-four hours; while in the fatal cases the average time was fifty-six hours. In the four cases not operated upon the intussusception was reduced by injections alone. This simple procedure is always useful and safe, and should be tried first, no matter in what stage the case is seen. From ten ounces to a pint of warm water and oil should be injected, the child being anesthetized and the hips well elevated. After the fluid has escaped, if examination shows that the sausage-shaped tumor has vanished, the child should be put to bed and a minute dose of morphine given. Careful examination should be made every six hours for forty-eight hours to guard against a return of the trouble. Neglect of this precaution has led many to underestimate the value of this mode of treatment. Even if complete reduction is not accomplished by the injection it often reduces the mass somewhat and renders subsequent operation easier. In cases, however, where the surroundings are such as to render an operation inadvisable even if found necessary, no time should be wasted in preliminary injections at the home.

Diagnosis.—In a large number of cases there is a history of sudden screaming, pallor and vomiting, followed from two to ten hours later by the passage of blood and slime. In the interval between the first attack of pain and the bloody movement the child may have been comparatively quiet, or have had several short attacks of pain and crying. The pulse rate and temperature are not far from normal. With such a history careful examination of the abdomen is demanded, and where the muscles are held rigid a little chloroform should be given. Examination by rectum is rarely useful or necessary. In the early stage nothing can be learned in that way, and later on it is unnecessary, as the tumor can be felt through the abdomen. A word of warning as to cases where the intussusception has descended into the rectum or even out through the anus should be given. Such cases have been mistaken for prolapse of the bowel. Children suffering from diarrhoea may have this complication, and the passage of blood-stained movements may have occurred before the intussusception, leading to the intussusception, when it occurs, being mistaken for an exacerbation of the enteritis. Such cases result fatally, without any recognition of the true state of affairs.

In some cases these signs are all absent, and there is merely restlessness, distention of the bowel, vomiting now and then and possibly slight looseness of the bowels. After twenty-four hours, if the intussusception is at all severe, there will be grave symptoms of obstruction.

* From *Amer. Gyn. & Obstet. Journal*.

Before operation strychnine and morphine should be given hypodermically. A large hot water bag should be placed on the table under the child. When the mass is small and in the ascending colon the incision may be made at the right of the rectus muscle, otherwise in the median line. The peritonæum in babies is so fine that it is well sometimes to hook an aneurism needle into the first small opening and pull the peritonæum forwards. When the mass is reached find out which is the lower part, then begin gently squeezing the intussusciptions. Just at the last an assistant may assist by gentle traction on the bowel just above where it enters. The intussusception may sometimes be partly reduced while still in the abdomen, but the last part of the bowel that has to be uncoiled must always be brought into view. In cases that have been reduced easily there is sometimes thickening and a small cup-shaped depression at the site of the apex of the intussusception. This must be carefully pressed out and made convex, to prevent recurrence.

When the squeezing begins to cause much cracking and tearing of the peritonæal coating, this method of procedure will have to be abandoned for resection. So also in the ileocecal variety, where the appendix has been much pinched, or in cases where reduction is impossible, or where the bowel appears much damaged after reduction. End-to-end anastomosis with a continuous suture of fine catgut, putting in a double row, is the best way of uniting the several ends of intestine. After washing the intestines with warm salt solution replace in the abdomen. No matter how great the difficulty of replacement, never be tempted to puncture the intestine. The abdomen is best closed by through and through sutures with no drainage.

Babies must be fed within a few hours after the operation. Mellin's food, whey and water (one drachm to two ounces), or the white of an egg in four ounces of cold boiled water to which one drachm of somatose is added, may be given often in small quantities. After two days breast-fed babies may be nursed; others should be fed on carefully prepared foods. The child should be turned from side to side or carried about occasionally. Morphine in very small doses is usually needed during the first twenty-four hours. Strychnine and digitalin may be given hypodermically as indicated. If the bowels do not move in twenty-four hours a small dose of calomel may be given. The first movement usually occurs in twelve hours after operation and generally contains blood and mucus. The sutures should never be removed before the tenth day, and if they are giving no trouble they may be allowed to remain longer.

THE TOXAEMIA OF PREGNANCY.*

A careful and useful article, by S. Marx, M D., of New York (*Medical Record*, April 20th) calls attention to a condition which is neither generally recognised nor understood. By the toxæmia of pregnancy is meant a disturbance of the metabolism in which, simultaneously with chemical changes in the urine, there appear certain well-marked nervous symptoms, that, when not actively treated, inevitably give rise to eclamptic convulsions. Clinical experience teaches that the toxæmia of pregnancy, the pre-eclamptic state, and eclampsia are conditions closely allied, and intimately wedded in one way or other, to disturbances of renal secretion. Further, that the pure toxæmia of pregnancy is always associated with kidney inadequacy, so far as the absolute diminution of secreted solid elements is concerned, and that the surest method of treatment is followed by a return of diuresis with a hypersecretion of the offending retained products. The one organic product which, in all human probability, is the most dangerous one is the chief solid constituent of the urine, namely, urea, or its congener, nitrogen. Urea in its formed state is not a very poisonous element, for large amounts have been injected into animals without bad results. And yet when approximately the same amount as is estimated to be in the blood of a woman suffering from eclampsia, is injected into similar animals, death or convulsions are the result in a short time. He holds that urea or its synthetic nitrogen is the sheet anchor as regards the safety of the pregnant women, and upon its excretion, whether diminished or increased, depends the health, nay the very life of the gravid woman. It is, therefore, argued that in the typical cases of nephritis gravidarum it is not the amount of albumin that should be our index as to when to induce labour, but always the amount of urea excreted. The author quotes a very typical case:—

A primipara, whose past and present history was perfect up to the time of her fatal illness. She passed her seventh month of pregnancy without the slightest difficulty. The urine had been carefully examined by her husband, a physician, and another expert, and had always been normal in every respect. Just two days after the last examination she suddenly complained of a very severe headache. In eight hours, vomiting set in, which was persistent, and without apparent cause. The collected urine for twelve hours—about six ounces—showed neither albumen nor casts. A urea estimation showed a diminution down to one-fourth of one per cent. She was stupid and drowsy, the pulse was rapid and small. She soon began to twitch, and her condition began to be precarious. It was decided to induce labour at once. Fits occurred, Cæsarean section was advised and declined, and the patient died undelivered.

She had been ill hardly thirty-six hours, passing rapidly from perfect health to death in so short a time.

The author holds very strongly that eclampsia is as absolutely preventable as is puerperal sepsis. Nay, it is more so, since even among the

* From *Medical Times & Hospital Gazette*.

best and the most careful, sepsis will occasionally creep in. The great trouble with many observers is that such a condition never draws upon them, since they have been taught, and they themselves will teach, that the uræmic state is always associated with casts and albumin in large amounts. This reasoning and teaching are not only absolutely wrong but positively dangerous. Have we not all seen women go to term with positive evidence of grave nephritic disease, with little or no discomfort? And, on the other hand, it is well known that patients die without the slightest evidences of either albumin or casts in the urine.

As regards the symptoms, they are generally those of a systemic intoxication. Patients complain of a severe headache, which persists and increases in spite of all measures. It is not localised, but spreads all over the top of the head and down into the nape of the neck. There are nausea and vomiting, which may be so severe as to become almost uncontrollable. The presence of œdema is characteristic. It is erratic. At times the patient is bloated to a marked degree, and then in a few hours the œdema will have entirely disappeared. It is this peculiar fugitive symptom which is as typical as any, and characteristic of this condition. Convulsions are preceded for days by twitchings, which are limited to the face or to one or other of the extremities.

Treatment: Prophylactic measures include first the regular examination of the urine, not in a perfunctory fashion as to albumin and casts, but a methodical estimation, at weekly or semi-monthly intervals, for the amount of urea excreted in a given twenty-four hours. Such an estimation is as quickly made as an ordinary urinary examination. When there is a lessened secretion the patient suffers, and when hypersecretion occurs the patient is freed from symptoms indicative of toxæmia. Successfully to treat these patients there must be absolute rest in bed. Every emunctory must be stimulated by means of drugs having specific action on the various excretory channels—the bowels by calomel, jalap, elaterium, or the various salines, the skin by hot packs, sweatings, or the milder diaphoretics.

Diet: Milk, buttermilk, kumyss, matzoon. Water is given in large amounts to flush the kidneys; the preference being a mild saline or pure spring water. Of the greatest value are hot rectal injections, quarts at a time being given with the patient on her side, with the buttocks elevated. These act exceedingly well not only as a food, but as direct urinary stimulants.

INSANITY IN WOMEN FROM THE GYNECOLOGIC AND OBSTETRIC POINT OF VIEW.*

BY A. LAPHORN SMITH, B.A., M.D., M.R.C.S., ENG., Montreal.

In several of the writer's recent papers he has referred incidentally to the marked improvement which has taken place in the mental condition of many of his cases after gynecologic operations, and more especially after those which had been performed for the cure of retroversion of the uterus. Nor is the writer alone in making this observation. Sebasta, of Vienna, has reported four cures and one case improved out of nine insane women on whom he operated for various abnormal conditions of the pelvic organs. Manton, of the Eastern Michigan Asylum, has reported many cases restored to sanity by gynecologic operations. Dr. Rohe, of the Maryland Hospital, has also recorded many cures after gynecologic operations in the insane. Dr. Bucke (*American Journal of Insanity*, July, 1898, No. 1, Vol. V.), reported 195 operations on 109 insane women, with the result that thirty-nine recovered from insanity; in thirty-two others the mental condition was improved; he says: "It is my opinion that very few of these cases would have recovered or greatly improved if they had not been operated upon. Some of them who did well must have very soon died had no operation been done." Some of these cases are worth noting, as they were cured. 1. Chronic mania 3½ years' duration, two cystic ovaries removed. 2. Chronic mania two years' standing, lacerated cervix repaired. 3. Chronic mania, over seven years' duration, cystic ovaries removed and lacerated cervix repaired. 4. Destructive mania for five years, both ovaries removed, one a multilocular cyst, the size of an orange the other ovary adherent and atrophied. 5. Three years insane, ovariectomy and ventrofixation. 6. Chronic mania sixteen years standing, ovaries enlarged and cystic, tubes adherent, removal of tubes and ovaries. 7. Delusional mania, five years standing, both ovaries removed, one a cyst of fifteen pounds. 8. Delusional insanity, two years standing, trachelorrhaphy.

Dr. Hobbs of the London, Ontario, Asylum, reports¹ that out of 173 women who were operated upon 73 recovered mentally, and forty-one were improved mentally. Dr. Hobbs points out that the number of insane married women in the asylums is nearly double the number of insane single women, which he attributes to the wrecking of the general health following the accidents and diseases that maternity entails, and the subsequent effect of those bodily ailments upon the mental condition. During five years he had 800 insane women under his care, and of these, 220 were examined by a gynecologist. 186 of these examined were found to have distinct, and in many cases serious lesions of the pelvic organs, there being 371 lesions in the 188 patients. Taking eight years in the history of the asylum, the introduction of gynecologic surgery as an

* Read before the Medical Chirurgical Society of Montreal. Published in *St. Louis Medical Review*.

adjunct of treatment has improved the percentage of recoveries from 33 per cent to 51 per cent on the admissions.

Dr. Ernest Hall, of Victoria, British Columbia, states that he examined 75 cases of insanity in women and found some tangible pelvic disease present in 72. Thirty-eight of these were operated upon with the result that there were six complete cures of insanity and seven partial cures. Engleman of Boston has reported a case of immediate cure of insanity by replacement of a retroverted uterus. Hack Tuke, the well known alienist, and McNaughton Jones, the author of the latest and one of the best text-books on gynecology, reports a case (Edinburg Medical Journal, October, 1900), of acute melancholia in a young girl in whom there had been for some time premonitory symptoms of insanity. Within a few weeks, he says, the patient was well enough to return home after simple rectification of the displaced uterus. He adds, "The depressing mental effect of retroversion of the uterus with the accompaniment of displacement of the ovaries is hardly recognized as generally as it should be." Prof. Japp Sinclair, who, you will remember, was chairman of the section on gynecology of the Montreal meeting of the British Medical Association, has recently recorded a case in which abdominal hysterectomy completely cured insanity in a woman with a bleeding myoma, who had been confined for some years in the Cheadle Royal Lunatic Asylum. A year later she was living at home and able to take care of her children and household just as well as before the symptoms first showed themselves. Dr. Rooke Ley of the Prestwick Asylum says that uterine displacements and tumors do undoubtedly cause and perpetuate mental disorders.

Dr. M. Madden says: "A large proportion of cases of mental disease in female patients is due either to disordered menstruation with tubal and ovarian irritation or to puerperal causes, for by the direct removal of these causes I have been able to restore the mental and physical health of patients formerly confined in asylums."

If time permitted I could quote from such well known authors as Clouston, Claye Shaw, Hack Tuke, Hyslop, Savage, Bevan Lewis and Mary Dixon Jones in support of my contention that pelvic conditions are important factors in the production of mental diseases; but surely these are sufficient. Let me then go on to point out in what manner this result is brought about. Before doing this, however, I must do what I can to refute that terrible error which has taken such an almost ineradicable hold of the minds of so many alienists, namely, that insanity is nearly always an hereditary disease. I feel convinced that a child born of the cleverest and most intellectual parents may become insane if improperly fed and if badly brought up, while a child born of weak-minded parents, or even insane ones, may grow up to be an intellectual giant if transplanted soon after birth to a highly intellectual environment, and if properly fed. Idiots and those having organic disease of the brain, are not referred to at all in this paper. As for the brains of the insane, the writer maintains that our brains are just what we make them by exercising, cultivating, feeding, starving and poisoning them. If this can be proved a great deal of what has been copied from one text book into another for the last fifteen years will have to be abandoned, with the re-

sult that the treatment will be rendered much more simple and successful.

Taking any hundred women in any asylum at random, an unbiased investigation of the cause of their insanity will enable us to group probably ninety-five of them under one of two headings; first, those cases due to defective nutrition of the brain, and second, those caused by poisoning of the brain. Under the first category we must place those women whose brains are starved by reason of insufficient food or light or air; second, those whose blood cannot nourish the brain because of increased demands upon it such as lactation, pregnancy, insomnia or exhausting hemorrhages; third, those in whom the brain is starved, because some great mental impression so affects the sympathetic nerve as to take away the inclination for food and to prevent its digestion if eaten; and fourth, those whose brains are starved because some condition of the uterus or ovaries is pressing upon or otherwise irritating the pelvic branches of the sympathetic nerve; which irritation is expressed in the brain by contraction of the circular fibres of the arterioles; so that no matter how rich the blood may be, an insufficient supply of it is able to reach the brain cells. In the category of insanity from poisoning, we must include cases of autointoxication by ptomains and from defective digestion and assimilation, whereby the proteids do not reach the ultimate stage of urea, but stop at the formation of creatin, creatinin, xanthin or uric acid; second, the case of defective secretion by the liver and kidneys so that poisons such as bile and urea accumulate in the blood and inundate the brain cells, instead of being removed as fast as they are produced; third, insanity after operations which, if not due to iodoform, should rather be called septic delirium from blood poisoning. We must now look a little more carefully into the bearing of each of these conditions as a factor in the causation of insanity.

STARVATION OF THE BRAIN DUE TO ANEMIA.

Every practitioner of twenty years experience can recall many cases, mostly in young women, in whom the brain failed to work correctly from this cause. One of the first cases of insanity that came under the writer's care was a young woman who became violently insane owing to a disappointment in love, and who had to be sent to the asylum. How did the brain become starved in this case? The process is easily explained; any all-absorbing passion or occupation takes away the appetite and even paralyses the function of digestion. This young girl was so much in love that for nearly a year before she had no time or inclination for food, and her blood became anemic. When the disappointment came she absolutely refused to eat, and a few days later her brain had become so absolutely deprived of nourishment that reasoning came to a standstill. The writer has seen many cases of this kind since then in varying degree and from different causes. At one time it has been a woman with uncontrollable vomiting of pregnancy, who becomes more and more anemic from starvation until the mind has wandered. Another time it has been a wife so plunged into grief by the death of her husband that she could not eat. The insanity is only temporary in all these cases for, as soon as food is

supplied and is digested, the brain rapidly recovers its normal functions. Under this heading may be classed seven or eight cases of puerperal insanity coming on during the last months of pregnancy and lasting for a month or two after delivery, in which there was no anemia. These patients might all be saved this affliction if we took a little more care in watching our pregnant cases, and when we see that the growing fetus is using up more material than the mother can produce in the ordinary way, we should supply artificially, in the form of iron and phosphoric acid or hypophosphites, the brain food which the child is depriving her. By this means all these cases that I have had have recovered their reason within, at the latest two months after delivery. Several of them continued nursing, but an abundant supply of hypophosphites and suitable food was given them in order to supply this loss. There are many other women who, though not insane, are suffering from marked mental debility due to anemia, the starting point of which was a lacerated cervix, which by reflex action so interfered with the digestion that the quality of the blood ran down until the brain was quite unable to think or to reason.

In these cases, as perhaps in all cases of brain anemia, the memory is the first function to suffer. Within a few months after the repair of the laceration the digestion improves so much that not only is the brain well nourished but more food is assimilated than can be used up and the patient stores up fat and gains weight. The importance of sunlight and fresh air is well known, but its bearing upon insanity is, perhaps, not so well understood. And yet we may safely say that the brightest and happiest women would eventually become melancholic and even insane, if she were kept in a room from which every ray of sunlight has been excluded. The superintendent of a large and successful sanitarium states that patients who are despondent almost to the verge of committing suicide, show the most remarkable improvement within a few days after being placed all day in the sun parlor. Many of the cases of mild insanity which are cured in sanitariums, principally by sunlight, fresh air and nourishing food, would probably have otherwise found their way to the asylums. From what has been said it is easy to understand why so many cases of recovery of the brain have been reported after removal of a bleeding myomatous uterus. It also explains why Hobbs, of the London, Ontario, Asylum, found curetting necessary in 131 women out of 173 operated on. The writer is unable to state how many women in the three large asylums in the Province of Quebec, aggregating 1353 women, are suffering from menorrhagia or metrorrhagia, but if there are any if there is even one, that one should be curetted. There is no reason why a woman in the asylum should be deprived of the same modern treatment which her sister, even if poor, can readily obtain outside of the asylum, more especially if there is any possibility or probability that gynecologic treatment might restore her brain to health.

It is interesting to note that the insanity of women at the menopause is attributed by Dana to starvation of the brain cells, owing to senile degeneration of the arterioles, which diminishes their calibre, and consequently allows less blood to pass through them. If such were always the case, little, of course, could be done for these patients; but it bears

upon our subject to remark that Skene, who has given this subject much attention, states that in his experience the insanity was due to overwork, child bearing and lactation with insufficient food and sleep. How often do we find just such conditions among the farmers' wives, who attribute such a large contingent to the insane asylums? But now we come to cases of insanity due to starvation of the brain from temporary or spasmodic contraction of the blood vessels, set up by irritation of the great sympathetic nerve in the pelvis. These cases are much more common than is generally supposed. It would take more than the time allotted for a paper to report briefly all the cases which have occurred in the writer's own experience alone. Of the two hundred and fifty cases of retroversion for which he has performed either ventrofixation or shortening of the round ligaments, a large proportion, if not all, were suffering from brain symptoms. Many of them described it as a dull aching weight and like a cloud on the intellect. It is true that none of them were quite insane; if they had reached that stage they would have been sent to the asylum, and the writer would have had fewer operations for displacements to report. There are doubtless many of these cases in the asylum now, in whom the primary cause of the alienation would be found in the pelvis if they were examined by a competent gynecologist. A few months ago the writer performed ventrofixation at the Samaritan Hospital on a woman with a fixed and retroverted uterus; both she and her husband stated that she was gradually losing her reason, and their evidence was corroborated by that of several friends. She was afraid to go upstairs alone to her bedroom even in the day time, lest she should throw herself out of the window, and she could not trust herself with a knife in her hand even to peel potatoes, so great was the temptation to cut her throat. And yet her blood was in good condition; it was only a functional derangement of the circulation of the brain, for on the day following the operation she said that she felt that a load had been lifted off her brain and that the thought of suicide had completely disappeared. From being the most melancholic, she became the merriest patient in the ward.

INSANITY FROM POISONING OF THE BRAIN.

It will be convenient to subdivide the causes of the poisoning under four heads. 1. Poisoning from defective action of the kidneys. 2. From defective action of the liver and bowels. 3. From defective assimilation or combustion, so that chemical products are formed in large quantities which should only exist, if at all, in very small quantities. 4. From septic or other poisoning after operations.

Uremic poisoning leading to insanity. The presence of urea in the blood is a common cause of insanity among women, and of these cases the writer can recall several, some of whom had to go into the asylum. The worst case was in Longue Point Asylum for two years. She had uremic convulsions near the end of her first pregnancy, which was a twin one, as so many of these convulsion cases are. Her kidneys were tremendously damaged, as evidenced by the large quantity of albumin in her urine and the marked dropsy of the labia especially. After confinement she became violently insane and had to be sent to the asylum where,

however, after the lapse of two years, her kidneys gradually recovered so that her brain was no longer poisoned. Soon after her return home she became pregnant again, and almost immediately the kidneys began to fail in spite of every treatment. The writer reported the case to the Medical Society at the time with a view of obtaining an expression of opinion from the members in favor of the course which he wished to pursue, namely, to terminate the pregnancy immediately, before the brain had time to be seriously affected. But not one supporting opinion could be obtained; on the contrary, every one who spoke opposed it strongly and at that time, eighteen years ago, he did not dare to follow his inclination in the face of this adverse opinion. The patient was therefore abandoned to her fate under medical treatment and died in convulsions at the sixth month. Since then the writer has urged premature delivery or miscarriage as soon as the condition of the kidneys is known to be serious, and the opinion that this is the right thing to do is gaining in favor.

Insanity from defective action of the liver and bowels. For a variety of reasons, which every general practitioner is familiar with, women are especially liable to suffer from constipation. At the Montreal Dispensary hundreds of patients have come stating that their bowels were moved only once in six or ten days. As it has been proved that the colon bacilli increases in proportion to the square of the time that the fecal matter remains in the intestine, it is evident that such a woman would be infected with an enormous number of these bacteria. These give off ptomaines which enter the blood and are carried to the brain. And, if the ptomaines of the staphylococcus and streptococcus are able to cause a wild delirium in septicemia, why should the products of the intestinal bacteria not poison the brain to some extent. Moreover, the bile, which has such a depressing effect upon the brain when it accumulates to any extent in the blood, is also absorbed back into the circulation if it remains too long in the intestine. The very word melancholy expresses this condition. No wonder then that these women burst into tears before they can tell their complaint and that they are almost constantly in a condition bordering on insanity. Their intense despondency frequently leads them to commit suicide. The foul tongue and bad complexion point to the treatment; blue pill or calomel at night and a saline purgative next morning at once raises their spirits, which remain so until the bile and toxins accumulate again. Many of these cases end in the asylum, but instead of the insanity being the cause of the furred tongue and constipation it is, on the contrary, the furred tongue and the constipation, which, in the writer's opinion, is the cause of the insanity.

Poisoning from disordered digestive apparatus. Anderson (Dominion Medical Monthly, February, 1901, p. 55) says: "Even the most serious mental disorders may result in predisposed persons from intestinal auto-intoxication. Thus Berkely mentions a case where a woman aged forty became insane after an obstipation of six days duration, in which all the symptoms promptly disappeared on free action of the bowels being secured. It is unnecessary to multiply examples of the symptoms, varying in degree from trifling discomfort to well defined insanity, that may result from stercoremia." The writer has seen all degrees of this condition

from the one who had to go to the asylum to the office patient who bursts into tears on entering the consulting room without knowing why she is crying. All of these patients have a coated tongue and their bowels are generally constipated. They are generally very fat, and although they have a bad color, they do not appear to be anemic. On being questioned they will tell us that they feel utterly unhappy, their memory is defective and they think that their friends no longer care for them. They are not insane, but the difference between them and many of those who are in the asylum is only one of degree. On examining for pelvic disease this is rarely found. A course of cholagogue cathartics and the correction of their diet, so that the proportion between the intake and the expenditure may be made to more evenly balance, soon makes a marked difference in their mental condition. One patient, who did not know her husband and refused to recognize him, after a month of the above treatment completely regained her sanity, so that she was able to return home and take care of her house, although a month before she had to be fed by the nurse with a spoon.

Insanity after operations. Dr. McNaughton Jones, President of the British Gynecological Society, has made very thorough and exhaustive collective investigations as to whether gynecologic operations predispose to insanity. The conclusion almost unanimously expressed was that they did not. Schauta, of Vienna, said: "I never saw in a healthy woman any disturbance of mind after an operation." Martin, of Berlin, and Hegar say the same. Lawson Tait never had a case; Homans had only two in a thousand laparotomies, and Spence Wells only had two in a thousand. Keith, of Edinburgh, had six in sixty-four hysterectomies, but it must be remembered that these occurred at a time when septic infection was much more common than it is now, and also that the method of performing hysterectomy was specially liable to be followed by sepsis, namely, strangulation of the uterus with the serre-noeud, leaving a sloughing stump. So that it is probable that these six cases of Keith's were either due to sepsis or to one of the antiseptics, namely, iodoform. The writer has therefore classed insanity after operations under the heading of brain poisoning either by sepsis or by antiseptics, chiefly iodoform. The writer's own experience of insanity after operation, and even it can not properly be called insanity, is limited to one case, which occurred ten years ago when the iodoform craze was at its height. Clamps were used instead of ligatures in the case, which was one of vaginal hysterectomy. After the clamps were applied and uterus removed, about 2 yards of iodoform gauze were passed between the clamps into the peritoneal cavity, partly for the purpose of keeping the intestines from coming down and partly to prevent microbes from going up. Within a few hours the patient became wildly delirious and while tossing about started a mild hemorrhage, which required plugging of the wound with another yard of iodoform gauze. The temperature rose to 106 and the patient died forty-seven hours after the operation. At the time, the delirium was thought to have been due to sepsis, but in the light of recent experience it was more probably a case of iodoform poisoning. For this and for other reasons the writer has not used an ounce of iodoform in ten years altogether.

at the five hospitals with which he is connected. The writer wishes it to be distinctly understood that nowhere in the foregoing remarks does he advocate the removal of healthy ovaries for the cure of insanity. This has been done a number of times by many different operators, so that enough experience has now accumulated to make it evident that no such result can be hoped for as the cure of mental disease by removal of healthy ovaries. On the contrary, Howard Kelly has pointed out, and his experience has been that of many others, that the insanity in these cases is rendered much worse by the operation.

CONTAGIOUSNESS OF INSANITY.

In a former part of this paper a strong conviction was expressed that insanity was not hereditary; if it were so a much larger proportion of those now in the asylum would have had insane parents, not insane uncles and aunts or grandfathers, but insane parents. Moreover, it is not logical to say that everything which happens to a person is hereditary because it happened to his father or mother. It was also stated that in insanity, as in consumption, the idea that it was hereditary has been one of the greatest obstacles to treatment, so that instead of being one of the most amenable, it has come to be considered one of the most hopeless. If it is hereditary, people say, then it is bound to come no matter what they may do; therefore, why do anything? Believing that heredity was one of the factors which has least to do with it, the writer was pleased while preparing this paper to see by the report of Dr. Vallee, Superintendent of the Beauport Asylum, that he believes that many cases of insanity are contagious, not in the narrow sense of actual contact, but in the sense that one member of a family may by imitation of the insane actions of another member gradually become as insane as her. He mentions in detail a striking instance of this which had recently come under his notice. This observation, coming from such a source, is of great value; what misery has been entailed upon perfectly healthy people by the ever present spectre overshadowing their lives, that their mother or their aunt or their grandfather was insane. This heredity of insanity has been so much abused in making statistics that on this point they are quite unreliable. For instance, the son of a clever man marries, has a large family, quarrels with his wife, leaves her, contracts syphilis, gets a gumatous tumour on the brain and goes to the asylum. His daughter marries and has uremic convulsions with her first child and also becomes insane. Evidently these two cases of insanity have absolutely nothing to do with each other, and yet she would probably be classed as hereditary because her father was insane. The same thing applies to alcoholic insanity, which is generally supposed to be hereditary; and yet the writer knows of several families where the father was a confirmed drunkard long before the children were born, and yet not one of those children care for alcohol; on the contrary, they loathe it. These children were for the most part educated away from home. In another family where the five sons were all brought up with the constant example of a drinking father before them, four have learned to drink. It is well known that many respectable men have been taught to be drunkards by the example of bad company; but if the contagiousness of drunkenness were better

realized by the family adviser, many a family might be saved from this disease, either by isolating the drunkard, or by sending the children away when practicable.

From the careful consideration of a large number of recent articles by writers of great knowledge of this subject, added to the writer's own somewhat limited experience, he feels justified in coming to the following conclusions :

1. Insanity is not hereditary, as is generally supposed, but it is sometimes contagious.

2. Insanity, in the majority of cases, is not due to organic disease of the brain, but to functional disorders of its circulation and of its circulating fluid.

3. In many cases in women the disorder of the brain's circulation is caused by reflex irritation, carried by the sympathetic from the pelvic organs and caused by retroversion of the uterus, cirrhotic ovaries, fibroid tumors, etc.

4. In many cases it is the fluid circulating in the brain which is at fault ; in some it is too poor in quality because the digestive apparatus is interfered with by reflex irritation of the sympathetic, due to a lacerated cervix, endometritis, etc.

5. In a lesser number of cases the brain is prevented from working because the blood is badly oxygenated or loaded with uric acid, urea, or other poisons.

6. Hundreds of cases are now on record of insanity being cured by removal of the cause ; the greatest number of mental cures having followed ventrofixation and the shortening of the round ligaments, for the removal of retrodisplacements, while many others have followed the ablation of fibroids, cirrhotic ovaries, the repair of lacerated cervices and even curetting.

7. Such being the case it is the duty of the family physician to examine carefully every woman in his practice who becomes insane, or to have her examined by a gynecologist, and if any pelvic disease is discovered it should be remedied.

8. It is the duty of every medical superintendent of an insane asylum to have a systematic examination made, preferably under anesthesia, so that unsuspected sources of irritation of the sympathetic situated in the pelvis may be removed. In one asylum alone this course has resulted in improvement in 66 per cent., and recovery mentally of 42 per cent. of those operated upon, although the pelvic troubles had existed for from six to sixteen years.

9. If anything is done it must be done thoroughly, as several cases have been reported where no benefit resulted until a second and more complete operation was performed.

10. In view of the number of women who become insane from uremia, more care should be exercised by practitioners in preventing this condition. All Protestant physicians should, with the advice and approval of one or two colleagues, empty the uterus before the kidneys become permanently damaged. (Catholic physicians are not allowed by their church to sacrifice the ovum in order to save the mother.)

THE TREATMENT OF TUBERCULOSIS OF THE LARYNX.*

PROF. BEAMAN DOUGLAS AND DR. J. D. MACPHERSON.

By DR. JOHN SENDZIAK, WARSAW, POLAND.

The author gives a very lucid history of the development of the treatment of phthisis of the larynx from its incipency in the first century to the present time.

Direct treatment only began with the discovery of the laryngoscope in the year 1858. Since that time the strides made in treatment have been marked.

Following the discovery of the laryngoscope came to the introduction of the use of cocain by Jellinek in 1884.

Up to the year 1887 tuberculosis of the larynx was thought to be incurable, but since then cases of recovery have been noted.

The author divides the treatment of laryngeal tuberculosis into general and local.

The local treatment he subdivides into asurgical (endolaryngeal) and surgical (external).

The local therapeutic remedies are divided into mild, active and palliative.

"The milder remedies are used in the initial stages of laryngeal tuberculosis as, for instance, in cases of catarrh, limited, it may be, to the posterior wall of the larynx or to one vocal cord (chorditis unilateralis), which, as is known, is characteristic of the disease. These milder remedies are also useful in the later stages, with extensive ulcerations and infiltrations of the larynx, when the general condition, as well as that of the lungs, contraindicates the more drastic local applications."

As milder remedies resorcin and alumen are mentioned as astringent, powers, and Ems water, menthol and balsamum peruvianum in the form of inhalations.

In every advanced conditions antiseptic drugs are especially indicated, both in the form of insufflation and inhalation.

Of the many drugs used, orthoform is particularly good, on account of its antiseptic analgesic action.

In the very advanced cases, where temporary relief is the only thing desired, the author recommends the use of cocain, eucaïn or morphin. Both cocain and eucaïn may be used in the form of a powder or in solution. The solution may be raised to the strength of 20 per cent.

Orthoform, for symptomatic treatment in advanced cases, not only has an antiseptic and analgesic action, but, according to the writer, seems to exert a favorable influence on the tuberculosis lesions. It is best

* *Journal of Laryngology, Rhinology and Othology.*

applied either in the form of a powder or in connection with menthol in an emulsion.

R. Orthoformi.....	12.00
Menthol.....	1.0-5.0
Ol. amygd. dule.....	30.00
Vitelli ovarum.....	25.00
Aq. dest. q. s. ad.....	100.00

Fiat emulsio.

Sig: Apply locally with brush.

Of the more drastic remedies used, lactic acid, which has stood the test of trial, seems to be *par excellence*. According to the author, it should be used rationally and in suitable cases. It is best to begin with a 50 per cent. solution and rapidly work up to the pure acid. It should be thoroughly rubbed into the diseased part and sufficient time allowed for the eschar to fall off before making a second application. Phenolum sulphuricum applied with a brush, in 20-40 per cent. solution, work well in cases where there is not too extensive ulceration. Many other drastic remedies are noted, but the above named have stood the test of experience.

The writer lays particular stress on general treatment. It is essential in all cases, and should be tried at the beginning, together with the local measures.—*The Post graduate*.

BILL NYE IN A HOSPITAL.

I have just been sent to the hospital for twenty days. My physician did it. He did it with an analysis. Anybody who amounts to anything nowadays gets analyzed . . . I like it here very much.

Sunday, 3 p.m. An analysis to-day shows more casts, fibrin, gelatin, and some zinc and copper. The chemist also discovers that in 1853 I fell from an apple tree and tore my panties in two places. . . .

Monday, 4 p.m. Temperature two-fifths of one degree above normal. Pulse regular, but sluggish. Have got all my business arranged, even to terms for shipment home.

Another chemical and microscopical analysis made yesterday of sputum, showing traces of nicotine and other poisons. Adieu, kind friends, I'm going home. A sweet young novice, who is training for a nurse, took my pulse this A. M. Took quite a while to find it, but I did not murmur or repine. I am trying to learn to love everybody, for to that bourne to which my chemist says I am going I should carry with me no enmities, no animosities. . . .

The life here at the hospital is delightful, and while I am fading away it is a joy to have loving hands bathing my little footies and manicuring my knobby brow. . . .

Good-bye, wicked world! After December you will have to pay your own taxes, so the chemist says, for traces of one lung, also floating island and ice cream, were found in this last analysis. Do not mourn for me, kind friends, and choke and sob and make yourselves sick. It will

be vain. Just live as I have done, so that you may come where I am at. Live upright lives and run the lawn mower about every ten days over my humble grave during the summer. That is all you can do. Weep not. In me you have lost a man who can never be replaced, but never mind—the world will have to dray on somehow. I couldn't be here all the time. Anybody with a particle of sense must have seen that I couldn't live forever.

P.S.—While penning the above words a messenger boy has come swiftly in with a note from the chemist. He says in his note: "We regret that an error was made in your case by our assistant, who, in the rush of business here at the college, has got your analysis somewhat confused with that of the justly celebrated race horse, Nancy Hanks. We unfortunately got the sputa mixed. On going over your case again we find that, whereas, there are signs of glanders in the Hanks' analysis, you are, as a matter of fact, almost too healthy."

So to-day I leave my kind little nurses in their neat attire. Good-bye, girls, I'm going home where they know me. No one there will count my fevered pulse in the still watches of the night. No one there will put a nice hot-water bay, that feels like a Mexican hairless dog, at my feet.

Seriously, what a blessing it is, when we are weary of work and the gastric functions go on a sympathetic strike and the solar plexus goes away and sits down on a stone pile to weep over the situation, that one can go to one of these cosy corners, out of the current of whoop and hurrah, and eat raw steak and be sort of made much of.—*Exchange*.

LUPUS VULGARIS.*

BY JOHN EDWIN HAYS, M.D.

Professor of Dermatology, etc., in the Hospital College of Medicine, Louisville, Ky.

Statistics indicate that lupus vulgaris is comparatively a rare disease. It is one, however, to which much interest attaches, in view of its stubborn and rebellious nature, the great disfigurement which so often attends its progress, and in presenting features which disclose its identity as one of the forms of tuberculosis.

The essential etiological factor in lupus vulgaris is the tubercle bacillus. Friedlander was the first to demonstrate the presence of this organism, and to prove by crucial tests its tubercular character. Lupus vulgaris may therefore be defined as a chronic inflammatory disease of the skin, tubercular in its nature, and characterized by the development of small elevated nodules in the corium, which tend to enlarge, coalesce, and spread, usually proceeding to ulceration. Once started, this ulceration usually continues until horrible disfigurement results from tissue loss.

The disease may attack any part of the integument, but usually occurs on the uncovered portions, as the hands and face, especially the latter. The favorite point of attack on the face is the nose and the neigh-

*Read before the Louisville Medico-Chirurgical Society.

boring part of the cheek. The mucous membrane of the cheek, palate, pharynx, and larynx, may be attacked, but, as a rule, not primarily, this condition succeeding an involvement of the skin.

The distinctive lesion in a patch of lupus vulgaris is a small nodule. This lupus nodule is about the size of a pin's head, is brownish-red in color and somewhat soft in consistency, and, as Hutchinson first pointed out, resembles apple jelly in its appearance. The tubercle bacilli are imbedded in these little neoplastic growths. They are scanty in number, and frequently very difficult to find.

As yet very little is positively known in what way the bacillus gains access to the corium. While it is very probable in the majority of cases that it enters through an abrasion in the epidermis, it may, however, be carried into the body through some of the natural channels, and be conveyed to the skin through the blood or lymph current.

The initial lesion is a single, or, as a rule, several raddish-brown papules, which may occupy a level with the skin, depressed below or slightly elevated above it. These papules eventually coalesce to form a patch, which is soon converted into an ulcerating surface. The progress of the disease is very slow, and absence of pain one of its distinguishing features.

Lupus vulgaris is a disease of early life, the great majority of cases beginning before the age of twenty years. It is said to be met with more in the female sex. It is a disease which frequently leads to a very great destruction of tissue before its termination.

As regards prognosis, it may be stated that in many cases it is possible to check the disease, but, unfortunately, a recurrence is very likely to take place. When complications exist, as, for instance, the presence of tubercles in other organs, they must be taken into account in forecasting the issue of the disease.

In a large proportion of cases the diagnosis of lupus vulgaris presents no difficulty, the appearance of the lesions being amply sufficient to identify the nature of the trouble. In obscure cases, however, one must have recourse to a process of exclusion. The presence of the bacillus would, of course, be conclusive, but it must be admitted that its discovery, when present in the lesions, is not always easy, even to an expert.

Syphilis and epithelioma are the two conditions which most closely resemble lupus vulgaris. Syphilitic lesions may be eliminated by the history of the case, traces of disease elsewhere in the body, by a much more rapid destruction of tissue, and in otherwise doubtful cases by their behavior to antisyphilitic measures. Malignant growths occur later in life, run a more rapid course, are more painful and more likely to implicate the neighboring lymphatic glands.

It may be interesting to mention in this paper a case of lupus vulgaris which is now under my care. The patient is a young man, nineteen years of age, slender in form but possessing fairly good general health. The disease began in May, 1900. The integument of the upper lip a little to the left of the median line was first involved; then the disease slowly crept toward the nose. When he came to me last November the disease had gone beyond the lip, and had invaded the cartilaginous septum and the left ala.

The margin of the advancing disease showed the characteristic nodules of lupus. No hereditary history of tubercle was obtainable. The trouble had been slowly progressing since its commencement; the treatment up to this time had not been successful in arresting its march. He had been given large doses of iodid of potassium, under the supposition that he was suffering from syphilis.

Several remedies were employed locally in this case, but the treatment which did most good was an application of a paste of salicylic acid and creosote. In the course of a few weeks' treatment he was so nearly cured that I allowed him to return to his home in an adjoining State. The destructive process was apparently checked, except possibly at a small spot on left ala, the former ulcerating surface of lip and nose being replaced by smooth scar tissue.

He returned to me about one month ago, having had a slight recurrence in the nose and also an outbreak of the disease in the mouth, involving the hard palate and gums. The lesions are again disappearing under treatment, and I hope to complete the cure in a short time. The disfigurement of the nose which has resulted in this case differs very much from that which usually occurs when this organ is invaded by syphilis. The sunken-in appearance so characteristic of the deformity occasioned by syphilis, and caused by a destruction of the bony framework of the nose, is entirely wanting in this case.

The general or internal treatment of lupus vulgaris is that which is proper for all forms of tuberculosis, namely, the use of remedies with a view to improve the general bodily health. Local treatment, to be successful, must have for its purpose the entire removal or destruction of the tubercle bacilli found in the diseased areas. To accomplish this end the following methods are to be employed: Excision by the knife, the galvano- and thermo-cautery, and the various caustic pastes. It becomes a matter of interesting inquiry which of the well-recognized methods to choose in managing these cases. My own experience is too limited to pronounce any very decided opinion as to their comparative merits. It is my judgment, however, that if the method so selected is the one best adapted to the particular case, and is skillfully and judiciously carried out, the chances are very good for a successful result.

In a limited number of cases of lupus, satisfactory results have been obtained by the employment of the Röntgen rays; thin plates of lead are used to protect the healthy skin surrounding the patch. While pursuing this treatment accidents are liable to occur, such as a violent dermatitis, followed by extensive sloughing. I am strongly inclined to look upon these rays as an uncertain measure, productive of possible good and probable harm, and should only be employed by a careful operator in cases which have stubbornly resisted other less dangerous methods.

In some cases the improvement in lupus has been rapid and striking under the use of Koch's or Maragliano's serum, but very few complete cures have been reported from their use.—*The American Practitioner and News.*

NOTES ON THE USE OF ADRENALIN.

BY D. J. GIBB WISHART, B. A. M. D.,

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On the 13th of February last, Messers Parke Davis & Co. forwarded to me a sample of a solution of Adrenalin Chloride, one in 1000, the chloride being dissolved in normal salt solution containing 0.5 per cent. chlore-tone. I at once began to use it in my office practice and have made several hundred applications, chiefly to the mucous membrane of the nose but also to that of the middle ear, the conjunctival cul de sacs, naso-pharynx, pharynx and larynx, but have had no experience of its use as a heart tonic. A 10 per cent. dilution of the above solution, which is equivalent to one in 10,000 has been sufficient to contract the blood vessels in the membranes in a few seconds, and a repetition of the same or the use of a stronger dilution will bleach these membranes; this is especially marked in that of the nose where the membranes will become tightly drawn over the turbinal bones which show up white through it. In connection with operations about the nose it has proved itself highly useful in rendering them practically bloodless and for a sufficient time to allow of the completion of a sawing operation for the removal of a spur from the septum. Where however, the operation involved the sawing of the septum through close to its base, as in Gleason's operation, the bleeding was lessened only, and not prevented. In the removal of adenoids or enlarged tonsils, I have failed to observe an appreciable lessening of the hemorrhage, doubtless owing to the fact that the larger blood vessels were not reached by the drug. If however a tampon soaked in the solution was applied firmly to the bleeding base from which these growths had just been removed, the bleeding was controlled in a few seconds nor have I observed that it was likely to recur.

I have had occasion to use it in connection with two marked cases, which may be quoted:

Case (1) Mr. A. aged 26, referred to me by Dr. T.

The patient had been suffering for ten days with constant spitting of blood. The lungs were examined with negative results, but there was an insufficiency of long standing and a history of syphilis. Examination showed that the roof and walls of the naso-pharynx were studded with points from which the blood was oozing freshly, a few of these were also to be seen in the pharynx and in the laryngeal vestibule, while again in the larynx, and the trachea, as far as could be seen, a distance of about three inches, the lining membrane also was studded with bleeding points. The nasal and oral mucous membranes were free nor had there been any vomiting or purging of blood. The condition was diagnosed as due to the heart lesion. In this case the membranes were sprayed frequently with a solution of adrenalin, and the bleeding which was causing great anxiety to both the patient and his friends, disappeared in a few days.

Case (2) The second case was that in which an incision had been made through the anterior faucial pillar in a oblique direction backwards and outwards to a depth of one inch, with the length of about one inch and a half, in an endeavor to reach the seat of the pus in a case of quinsy. Here the hemorrhage was alarming, but the insertion of a tampon soaked in adrenalin solution and pressed firmly into the opening with the first and second fingers, for about five minutes served to check the bleeding.

The solution requires to be kept tightly corked or it will not remain sterile. When mixed in water in which a tablet of cocaine has been dissolved, the solution will turn presently to a pinkish red colour but the action of the drug is apparently not interfered with. Being an animal extract it is necessarily prone to decompose when in solution, but its introduction in a form of compressed tablets giving the strength of one in 10,000 when mixed with one ounce of water, will largely obviate this objection. It is now several years since I obtained a sample of Armours powdered extract of suprarenal capsule and I have never since allowed my office to be without some one of the forms in which the extract of the gland has been prepared. All of these with the exception of suprarenal liquid with chlorotone, introduced about a year ago, by Messers Parke Davis, have been very prone to decompose, and in addition required straining and a very careful preparation to make the extract suitable in nasal surgery. The present form is infinitely superior to the previous preparation, and Dr. Takamine, to whose efforts and pains-taking investigations we owe the isolation of the active principle of the suprarenal gland, deserves all the credit which has been awarded him.

In March last, Dr. Takamine, addressing the New York Academy of Medicine, in the discussion of Dr. Mayer's papers on adrenalin made the following remarks—*inter alia* :—

" My substance is crystallized, and I think this is Nature's certificate, that it is a definite chemical composition and not the result of any arbitrary mixture—Nature's certificate in short that it is the active principal of the supra-renal gland. Its natural tendency moreover is always to resolve itself into a crystalline form. You take one form of crystal for instance, and dissolve it in hot water, and you find if you subsequently evaporate the water, that it resumes its crystalline form, just in the same way sugar does. Now I wish to conduct one or two experiments with the view to showing you some of the properties possessed by this substance. Here I have a solution of adrenalin, one in 10,000 in water. Into it I put a drop of ferric chloride—just a drop, observe, and in a few moments you will observe this colorless solution will change to a beautiful green. That is one characteristic change of the active principle.

Next we find that by the careful addition of alkali the green colour can be changed into a beautiful red, while by addition of a few drops of caustic soda to neutralize the alkali you can change the red color back into green—thus giving you both ends of the drug store. Now I will conduct another experiment to show you the strong power of the substance as a reducing agent. I again take a solution of 1 to 10,000, and into it I put a few drops solution of chloride of gold. Inside of five or ten minutes this colorless solution will gradually change first to a pinkish and

then to a purplish red, and in a few minutes more the solution of chloride of gold will be reduced to metallic form. This is another characteristic change which adrenalin produces. Now I wish to direct your attention to the diagrams on the wall which show the effect of adrenalin on the blood pressure. Its strength in this respect is shown by the fact that I c. c. of a chloride solution 1 to 100,000 intravenously injected has a striking effect. You will observe that within a few seconds the blood pressure rises, and then gradually comes down. The amount of adrenalin injected into a dog weighing 8 kilos was, 00001 gram, which is equivalent to .00000125 grams per kilo body weight, which shows a very wonderful amount of strength. Another demonstration is a very easy one. If you take a weak solution you will find that the conjunctiva of the eye can be blanched in a very few moments. I have tried how far the solutions can be diluted and still retain this blanching power, and I found that a drop of as weak a solution as 1 to 1,500,000 is sufficient to bleach the eyelid within a minute. In this case the blanching does not last very long, but still the effect is sufficient to show how remarkably strong the substance is. This means that one of the tablets of adrenalin tertrate which I have here when dissolved in two gallons of water will show the activity of the substance on the eyelid, or in other words, one drop of the solution of 1 to 1000 which is now before you when put into an ounce of water or normal salt solution will suffice for this purpose. When I first made up bottles of Adrenalin for experimental purposes, some of them developed a growth similar to what you find in cocaine and ether, but I have since removed that objection by adding a little preservative. chloretone, I have found to act very nicely, a small quantity of it being quite sufficient to do away with the sediment. Apart from this however, I have done away with the necessity of keeping the preparation in solution by getting it made up in the tablets.

Another point I wish to direct attention to is this, that the properties of the substance are not destroyed by heat, and therefore a solution can readily be made sterile by boiling it, which you can do for whatever time you please without destroying the drug.

"With regard to the existance of bacteria or fungus growth, it all depends on the extent to which you expose the solution."

"The same thing applies to almost every other preparation. In fact if you take distilled water and expose it long enough to the air, the chances are that it will get infection. Adrenalin being of organic origin is of course more likely to become infected in a shorter period of time than water. In such cases as affections of the eye, where the organs are peculiarly sensitive it goes without saying that it is necessary to be more than ordinarily careful about the sterilization of any substance that is to be used as a hemostatic or remedial agent. Therefore when adrenalin is used in such cases all you have to do is to boil the solution, and if that does not do, boil it again, say for twenty-four hours if you like."

"Since I have added chloretone, I am perfectly satisfied as to the stability of the preparation for all practical purposes. I have made up a thousand bottles with chloretone which have not yet been opened, and they remain perfectly bright. Those that we have opened, I admit, we

cannot be sure of. I hope by means of further investigations along this line to be able to produce a substance that will be perfectly stable."

In conclusion, it should be observed that in no instance has there been that tendency to an increase in the amount of the bleeding, subsequent to operation, which has been remarked by other observers in connection with the earlier preparations from the gland. A uvulotomy in a bleeder was followed by the loss of scarcely one drop of blood. Nor have there been any constitutional disturbances whatever appreciable after its use.

The drug is therefore, a valuable addition to our aemamentarium ;

First,—to reduce superficial congestion, in acute inflammation of the mucous membranes.

Second,—as an aid to diagnosis.

Third,—as an aid to bloodless operations, where ligation cannot be employed.

Fourth,—as a means of controlling severe hæmorrhage after operations.

THE FIGHT AGAINST TUBERCULOSIS*

In the Light of the Experience Gained in Successful Combat of Other Infectious Diseases.

By PROF. ROBERT KOCH, Geh. Med. Rath.

The task with which this Congress will have to busy itself is one of the most difficult, but it is also one in which labor is most sure of its reward.

I need not point again to the innumerable victims tuberculosis annually claims in all countries, nor to the boundless misery it brings on the families it attacks. You all know that there is no disease which inflicts such deep wounds on mankind as this. All the greater, however, would be the general joy and satisfaction if the efforts that are being made to rid mankind of this enemy, which consumes its inmost marrow, were crowned with success.

There are many, indeed, who doubt the possibility of successfully combating this disease, which has existed for thousands of years, and has spread all over the world. This is by no means my opinion. This is a conflict into which we may enter with a surely founded prospect of success, and I will tell you the reasons on which I base this conviction.

TUBERCULOSIS A PREVENTABLE DISEASE.

Only a few decades ago the real nature of tuberculosis was unknown to us ; it was regarded as a consequence, as the expression, so to speak, of social misery, and, as this supposed cause could not be got rid of by simple means, people relied on the probable gradual improvement of social conditions, and did nothing. All this is altered now. We know

* *British Medical Journal.*

that social misery does indeed go far to foster tuberculosis, but the real cause of the disease is a parasite—that is, a visible and palpable enemy, which we can pursue and annihilate, just as we can pursue and annihilate other parasitic enemies of mankind.

Strictly speaking, the fact that tuberculosis is a preventable disease ought to become clear as soon as the tubercle bacillus was discovered, and the properties of this parasite and the manner of its transmission became known. I may add that I, for my part, was aware of the full significance of this discovery from the first, and so will everybody have been who had convinced himself of the casual relation between tuberculosis and the tubercle bacillus. But the strength of a small number of medical men was inadequate to the conflict with a disease so deeply rooted in our habits and customs. Such a conflict requires the co-operation of many, if possible of all, medical men, shoulder to shoulder with the State and the whole population. The moment when such co-operation is possible seems now to have come. I suppose there is hardly any medical man now who denies the parasitic nature of tuberculosis, and among the non-medical public, too, the knowledge of the nature of the disease has been widely propagated.

Another favorable circumstance is that success has recently been achieved in combating several parasitic diseases, for we have learned from these examples how the conflict with pestilences is to be carried on.

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SPUTUM THE MAIN SOURCE OF INFECTION IN TUBERCULOSIS.

These examples may suffice to show what I am driving at, which is to point out that, in combating pestilences, we must strike at the root of the evil, and must not squander force in subordinate ineffective measures. Now the question is, what has hitherto been done, and what is about to be done against tuberculosis, really strikes the root of tuberculosis, so that it must sooner or later die.

In order to answer this question it is necessary first and foremost to inquire how infection takes place in tuberculosis. Of course, I presuppose that we understand by tuberculosis only those morbid conditions which are caused by the tubercle bacillus.

In by far the majority of cases of tuberculosis the disease has its seat in the lungs, and has also begun there. From this fact it is justly concluded that the germs of the disease, that is, the tubercle bacilli, must have got into the lungs by inhalation. As to the question where the inhaled tubercle bacilli have come from, there is also no doubt. On the contrary, we know with certainty that they get into the air with the sputum of consumptive patients. This sputum, especially in advanced stages of the disease, almost always contains tubercle bacilli, sometimes in incredible quantities. By coughing and even speaking, it is flung into the air in little drops that is, in a moist condition, and can at once infect persons who happen to be near the coughers. But it may also be pulverized when dried, in the linen or on the floor, for instance and get into the air in the form of dust

In this manner a complete circle, a so-called *circulus vitiosus*, has been formed for the process of infection from the diseased lung, which produces phlegm and pus containing tubercle bacilli, to the formation of moist and dry particles (which, in the virtue of their smallness, can keep floating a good while in the air), and finally to new infection, if particles penetrate with the air into a healthy lung and originate the disease anew. But the tubercle bacilli may get to other organs of the body in the same way, and thus originate other forms of tuberculosis. This, however, is considerably rarer. The sputum of consumptive people, then, is to be regarded as the main source of the infection of tuberculosis. On this point, I suppose, we are all agreed. The question now arises whether there are not other sources too, copious enough to demand consideration in the combating of tuberculosis.

Great importance used to be attached to the hereditary transmission of tuberculosis. Now, however, it has been demonstrated by thorough investigation that, though hereditary tuberculosis is not absolutely non-existent, it is nevertheless extremely rare, and we are at liberty, in considering our practical measures, to leave this form of origination entirely out of account.

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HUMAN SPUTUM THE MAIN SOURCE OF HUMAN TUBERCULOSIS.

So the only main source of the infection of tuberculosis is the sputum of consumptive patients, and the measures for the combating of tuberculosis must aim at the prevention of the dangers arising from its diffusion. Well, what is to be done in this direction? Several ways are open. One's first thought might be to consign all persons suffering from tuberculosis of the lungs, whose sputum contains tubercle bacilli, to suitable establishments. This, however, is not only absolutely impracticable, but also unnecessary. For a consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous. This is certainly true of very many patients, especially in the first stages, and also of those who belong to the well-to-do classes, and are able to procure the necessary nursing. But how is it with people of very small means? Every medical man who has often entered the dwellings of the poor, and I can speak on this point from my own experience, knows how sad is the lot of consumptives and their families there. The whole family have to live in one or two small ill-ventilated rooms. The patient is left without the nursing he needs, because the able-bodied members of the family must go to their work. How can the necessary cleanliness be secured under such circumstances? How is such a helpless patient to remove his sputum, so that it may do no harm? But let us go a step further and picture the condition of a poor consumptive patient's dwelling at night. The whole family sleep crowded together in one small room. However cautious he may be, the sufferer scatters the morbid matter secreted by his diseased lungs every time he coughs, and his relatives close beside him must inhale this poison. Thus whole families are infected. They die out, and awaken in the minds of those who do not know the infectiousness of tuberculosis the opinion

that it is hereditary, whereas its transmission in the cases in question was due solely to the simplest process of infection, which do not strike people so much, because the consequences do not appear at once, but generally only after the lapse of years.

FOCI OF TUBERCULOUS INFECTION.

Often, under such circumstances, the infection is not restricted to a single family, but spreads in densely inhabited tenement houses to the neighbors, and then, as the admirable investigations of Biggs have shown in the case of the densely-peopled parts of New York, regular nests of foci of disease are formed. But, if one investigates these matters more thoroughly, one finds that it is not poverty *per se* that favors tuberculosis, but the bad domestic conditions under which the poor everywhere, but especially in great cities, have to live. For, as the German statistics show, tuberculosis is less frequent, even among the poor, when the population is not densely packed together, and may attain very great dimensions among a well-to-do population when the domestic conditions, especially as regards the bedrooms, are bad, as is the case, for instance, among the inhabitants of the North Sea Coast. So it is the overcrowded dwellings of the poor that we have to regard as the real breeding places of tuberculosis; it is out of them that the disease always crops up anew, and it is to the abolition of these conditions that we must first and foremost direct our attention if we wish to attack the evil at its root, and to wage war against it with effective weapons.

This being so, it is very gratifying to see how efforts are being made in almost all countries to improve the domestic conditions of the poor. I am also convinced that these efforts, which must be promoted in every way, will lead to a considerable diminution of tuberculosis. But a long time must elapse ere essential changes can be effected in this direction, and much may be done meanwhile in order to reach the goal much more rapidly.

THE NEED FOR HOSPITALS FOR CONSUMPTIVES.

If we are not able at present to get rid of the danger which small and overcrowded dwellings involve, all we can do is to remove the patients from them, and, in their own interests and that of the people about them, to lodge them better; and this can be done only in suitable hospitals. But the thought of attaining this end by compulsion of any kind is very far from me; what I want is that they may be enabled to obtain the nursing they need better than they can obtain it now. At present a consumptive in an advanced stage of the disease is regarded as incurable and as an unsuitable inmate for a hospital. The consequence is that he is reluctantly admitted and dismissed as soon as possible. The patient, too, when the treatment seems to him to produce no improvement, and the expenses, owing to the long duration of his illness, weigh heavily upon him, is himself animated by the wish to leave the hospital soon. That would be altogether altered if we had special hospitals for consumptives, and if the patients were taken care of there for nothing, or at least at a very moderate rate. To such hospitals they would will-

ingly go; they could be better treated and fed there than is now the case. I know very well that the execution of the project will have great difficulties to contend with, owing to the considerable outlay it entails. But very much would be gained if, at least in the existing hospitals, which have to admit a great number of consumptives at any rate, special wards were established for them in which pecuniary facilities would be offered them. If only a considerable fraction of the whole number of consumptives were suitably lodged in this way, a diminution of infection, and consequently of the sum total of tuberculosis, could not fail to be the result. Permit me to remind you in this connection of what I said about leprosy. In the combating of that disease also great progress has already been made by lodging only a fair number of the patients in hospitals. The only country that possesses a considerable number of special hospitals for tuberculous patients is England, and there can be no doubt that the diminution of tuberculosis in England, which is much greater than in any other country, is greatly due to this circumstance. I should point to the founding of special hospitals for consumptives and the better utilization of the already existing hospitals for the lodging of consumptives as the most important measures in the combating of tuberculosis, and its execution opens a wide field of activity to the State, to municipalities, and to private benevolence. There are many people who possess great wealth, and would willingly give of their superfluity for the benefit of their poor and heavily afflicted fellow creatures, but do not know how to do this in a judicious manner. Here is an opportunity for them to render a real and lasting service by founding consumption hospitals or purchasing the right to have a certain number of consumptive patients maintained in special wards of other hospitals free of expense.

As, however, unfortunately, the aid of the State, the municipalities, and rich benefactors will probably not be forthcoming for a long time yet, we must for the present resort to other measures that may pave the way for the main measure just referred to, and serve as a supplement and temporary substitute for it.

NOTIFICATION.

Among such measures I regard obligatory notification as specially valuable. In the combating of all infectious diseases it has proved indispensable as a means of obtaining certain knowledge as to their state, especially their dissemination, their increase and decrease. In the conflict with tuberculosis also we can not dispense with obligatory notification; we need it not only to inform ourselves as to the dissemination of this disease, but mainly in order to learn where help and instruction can be given, and especially where the disinfection which is so urgently necessary when consumptives die or change their residences has to be effected. Fortunately it is not at all necessary to notify all cases of tuberculosis, nor even all cases of consumption, but only those which, owing to the domestic conditions, are sources of danger to the people about them. Such limited notification has already been introduced in various places in Norway, for instance, by a special law, in Saxony by a ministerial

decree, in New York and in several American towns, which have followed its example. In New York, where notification was optional at first and was afterwards made obligatory, it has proved eminently useful. It has thus been proved that the evils which it used to be feared the introduction of notification for tuberculosis would bring about need not occur, and it is devoutly to be wished that the examples I have named may very soon excite emulation everywhere.

DISINFECTION.

There is another measure, closely connected with notification—namely, disinfection, which, as already mentioned, must be effected when consumptives die or change their residence, in order that those who next occupy the infected dwelling may be protected against infection. Moreover, not only the dwellings but also the infected beds and clothes of consumptives ought to be disinfected.

EDUCATION OF THE PUBLIC.

A further measure, already recognized on all hands as effective, is the instructing of all classes of the people as to the infectiousness of tuberculosis, and the best way of protecting oneself. The fact that tuberculosis has considerably diminished in almost all civilized states of late is attributable solely to the circumstance that knowledge of the contagious character of tuberculosis has been more and more widely disseminated, and that caution in intercourse with consumptives has increased more and more in consequence. If better knowledge of the nature of tuberculosis has alone sufficed to prevent a large number of cases, this must serve us as a significant admonition to make the greatest possible use of this means, and to do more and more to bring it about that everybody may know the dangers that threaten him in intercourse with consumptives. It is only to be desired that the instructions may be made shorter and more precise than they generally are, and that special emphasis be laid on the avoidance of the worst danger of infection, which is the use of bedrooms and small, ill-ventilated workrooms simultaneously with consumptives. Of course, the instruction must include directions as to what consumptives have to do when they cough and how they are to treat their sputum.

SANATORIA.

Another measure which has come into the foreground of late, and which at this moment plays to a certain extent a paramount part in all efforts for the combating of tuberculosis, works in quite another direction. I mean the founding of sanatoria for consumptives.

That tuberculosis is curable in its early stages must be regarded as an undisputed fact. The idea of curing as many tuberculosis patients as possible in order to reduce the number of those that reach the infectious stage of consumption, and thus to reduce the number of fresh cases, was therefore a very natural one. The only question is whether the number of persons cured in this way will be great enough to exercise an appreciable influence on the retrogression of tuberculosis. I will try to answer this question in the light of the figures at my disposal.

According to the business report of the German Central Committee for the Establishment of Sanatoria for the Cure of Consumptives, about 5500 beds will be at the disposal of these institutions by the end of 1901, and then, if we assume that the average stay of each patient will be three months, it will be possible to treat at least 20,000 patients every year. From the reports hitherto issued as to the results that have been achieved in the establishments we learn further that about 20 per cent. of the patients that have tubercle bacilli in their sputum lose them by the treatment there. This is the only sure test of success, especially as regards prophylaxis. If we make this the basis of our estimates, we find 4000 consumptives will leave these establishments annually as cured. But, according to the statistics ascertained by the German Imperial Office of Health, there are 226,000 persons in Germany over 15 years of age who are so far gone in consumption that hospital treatment is necessary for them. Compared with this great number of consumptives, the success of the establishments in question seems so small that a material influence on the retrogression of tuberculosis in general is not yet to be expected of them. But pray do not imagine that I wish, by this calculation of mine, to oppose the movements for the establishment of such sanatoria in any way. I only wish to warn against an over-estimation of their importance which has recently been observable in various quarters, based apparently on the opinion that the war against tuberculosis can be waged by means of sanatoria alone, and that other measures are of subordinate value. In reality the contrary is the case. What is to be achieved by the general prophylaxis resulting from recognition of the danger of infection and the consequent greater caution in intercourse with consumptives is shown by a calculation of Cornet's regarding the decrease of mortality from tuberculosis in Prussia in the years 1889 to 1897. Before 1889 the average was 31.4 per 10,000, whereas in the period named it sank to 21.8, which means that, in that short space of time, the number of deaths from tuberculosis was 184,000 less than was to be expected from the average of the preceding years. In New York, under the influence of the general sanitary measures directed in a simple exemplary manner by Biggs, the mortality from tuberculosis has diminished by more than 35 per cent. since 1886; and it must be remembered that both in Prussia and in New York the progress indicated by these figures is due to the first beginnings of these measures. Considerably greater success is to be expected of their further development. Biggs hopes to have got so far in five years that in the city of New York alone the annual number of deaths from tuberculosis will be 3,000 less than formerly.

Now, I do indeed believe that it will be possible to render the sanatoria considerably more efficient. If strict care be taken that only patients be admitted for whom the treatment of those establishments is well adapted, and if the duration of the treatment be prolonged, it will certainly be possible to cure 50 per cent., and perhaps still more. But even then, and even if the number of sanatoria be greatly increased, the total effect will always remain but moderate. The sanatoria will never render the other measures I have mentioned superfluous. If their number become great, however, and if they perform their functions properly, they may materially aid the strictly sanitary measures in the conflict with tuberculosis.

MISCELLANEOUS.

THE EARLIEST SIGNS OF TUBERCULOSIS.—Professor Bozzalo, of Turin, in a paper read at the recent International Congress of Tuberculosis at Naples, has conveniently summarized the following eleven important points which are of assistance in forming a diagnosis of pulmonary phthisis in its earliest stages. They are: 1. Albuminuria alternating with phosphaturia. 2. A pseudochlorosis distinguishable from true chlorosis by the slighter degree of reduction of the hemoglobin and by the less-marked vascular and cardiac disturbances (palpitation, soft pulse, pulsating arteries, etc.). 3. The presence of gastric disturbances like gastralgia, anorexia, nausea, and vomiting. 4. Tachycardia in the absence of fever. 5. Diminution of blood-pressure. 6. A rise of temperature following bodily or mental exertion above the slight rise proper to health. In women a rise of from 0.3° to 0.4° C. is observable before the onset of each menstrual period. 7. A undue tendency to sweat after exertion, mental or bodily; also night-sweats. 8. Pain in the supra-orbital regions and in the neck. 9. A slight inequality of the pupils with a tendency to dilatation (mydriasis). 10. The occurrence of herpes zoster. 11. Enlargement of the spleen. Of these, the first seven symptoms are the most frequently met with and possess considerable diagnostic value.—*Lancet*.

THE MEDICAL AND SURGICAL TREATMENT OF ACUTE AND CHRONIC LYMPH NODES OF THE CERVICAL REGION. The writer concludes as follows:

1. The cause of tuberculous adenitis of the cervical region is almost always local and takes place through the buccal cavity.

2. The glandular manifestation, when it progresses, and especially when it is followed by suppuration, indicates a damaged and usually useless, often dangerous, gland.

3. The removal of such a gland *in toto* and promptly is neither difficult nor dangerous, and is the treatment indicated.

4. Nature will probably provide a new and equally perfect protection in the stead of the one that is lost.

5. Multiple enlarged glands indicate a constitutional tendency which will not be benefited by removal, except when local discomforts and dangers indicate it.

6. Small groups or single slowly-growing glands are subject to the same indication.—H. Horace Grant, *Louisville Mo. Journal of Med. and Surgery*.

SIMPLE tapping, under full antisepsis, may be relied upon to relieve any hydrocele, and will cure a small percentage of cases.—*Med. Summary*.

NAPHTHALAN is the substance which Voges calls an antitoxin for mosquito bites. He states that its action on the poison from the bite is as effective and specific as that of an antitoxin on the bacterial toxin. Voges is at the head of the National Department of Hygiene of the Argentine Republic.—*Med. Times*.

HEPATIC DISTURBANCE, FUNCTIONAL.—

Rhubarb, powd.	8 grains.
Sodium bicarb.	20 grains.
Ipecac, powd.	1 grain.
Nux vomica, tinct.	20 minims.
Peppermint water, to make.	4 ounces.

A teaspoonful before each meal.

—LOCKWOOD.

BED-SORES.—If the nurse is competent this painful complication will rarely require treatment. It is advisable to rub the parts upon which the patient rests with alcohol, and daily sponging of the entire body with warm water and then with alcohol will add greatly to comfort. Should a suspicious spot of redness present, remove the pressure therefrom by an air-cushion, and prevent the folds of linen pressing patient. Dry dressings are preferable to moist for bed-sores, and oxide of zinc in powder or ointment is one of the most valuable remedies; acetate of aluminum has also a very beneficial effect. At times considerable loss of substance is found, giving rise to a very foul odor; in these cases a charcoal poultice acts remarkably well.—ROTCH (*American Medical Review*.)

HABITUAL CONSTIPATION.—

R. Sulphuris loti,	
Potass. bitartrat.	aa dr. i.
Pulv. sennæ fol.	dr. iv.
Syr. rhei.	dr. ii.
Syr. rhamni purshianæ.	ad oz. iii.
M. Sig.—Teaspoonful morning and evening.—	<i>Texas Clinic.</i>

OBSTINATE VOMITING.—

R. Acetanilidi.	gr. vi.
Caffeinæ citratæ.	gr. iii.
Camphoræ monobromatæ.	gr. vi.

M. ft. pil. or chart., No. vi. Sig.—Dissolve in a little brandy, pour over cracked ice and give from a spoon. Repeat in one-half hour, if necessary.

R. Sodii bicarb.,	
Spir. etheris nitrosi.	aa dr. iiss.
Aq. menthæ pip.	q. s. ad oz. iv.

M. Sig.—One teaspoonful at a dose and repeat every few minutes until vomiting is relieved.

R. Tinct. iodi.	m. x.
Aq. destil.	oz. iv.

M. Sig.—One tablespoonful in half-glass of sweetened water between meals.—*Med. News.*

ORGANIC CEPHALALGIA.—There are very few headaches that give such overwhelming agony as those of organic character. These are usually, if not invariably, steady and violent.—If the pulse is also irregular it is confirmatory of the diagnosis. I know of no way in which relief can be more certainly obtained than by the use of potassium iodide.—DOUGLAS (*Public Health Journal*.)

EDITORIAL.

THE RELATION OF BOVINE TO HUMAN TUBERCULOSIS.

An unusual flutter has been caused in the medical profession as well as in scientific circles generally and among the laity by the declaration of Professor Koch at the London Congress of Tuberculosis, that it is impossible to transmit bovine tuberculosis to the human subject. This idea, which is by no means original with Professor Koch, is based on certain researches he has recently conducted in which he found it impossible to infect cattle with the sputa or the bacilli from cases of tuberculosis in man. The lay press, with characteristic eagerness to create a sensation when news is scarce, have accepted the learned Professor's opinions as absolute statements of fact and in consequence have drawn hasty conclusions and have indulged in much absurd comment wholly unwarranted by the data brought forward by the observer. It is always unsafe to accept the dictum of any investigator, no matter how eminent, unless substantiated by positive evidence. While any opinion expressed by so competent an authority as Dr. Koch is worthy of all respect and of careful investigation it would be exceedingly unwise to accept it as oracular. The medical world cannot forget the unpleasant reaction and the discredit to medicine that followed his premature announcement of a cure for tuberculosis a few years ago. Moreover since the *tuberculin fiasco*, Koch's contributions to medical science have not been such as to re-establish him in the full confidence of the profession and many regret that he did not allow his fame to rest on the sure foundation of his splendid achievements earlier in his career.

In his investigations into malaria and Texas fever, he showed a tendency to arrogate to himself credit for discoveries in which others had preceded him many years, and this disinclination to give due credit to fellow-workers in the field of Science has been particularly resented on this side of the Atlantic. Besides, what is now heralded in the secular press as an epoch-making discovery—that man is insusceptible to bovine tuberculosis, was suggested by Theobald Smith and others some years ago but in the guarded and dignified manner of careful investigators. From the impossibility of using human subjects for experimental purposes there is no direct proof forthcoming that man cannot be infected by the organisms of bovine tuberculosis. Because he found it impossible to produce the disease in animals by inoculating them with the germs of

human tuberculosis, Koch concludes that the diseases in man and cattle are entirely different and therefore, reasons apparently by analogy, that man is not susceptible to bovine tuberculosis. Such evidence certainly does not establish his contention and will not convince. So far as weight of authority goes, he is opposed by the general opinion of the Congress at which his paper was read, by Virchow, Professor McFadyean, and certainly by the majority of clinicians in all parts of the world. The matter must still be considered one of the unsettled problems in medicine. The general interest stirred up by Koch's announcement will undoubtedly stimulate research in the matter, which is probably the greatest result that will follow on what he has said.

To jump from Koch's opinions to the conclusion that all the restrictions heretofore placed on the sale of the milk and meat of tuberculous animals are entirely unnecessary, and that there is no danger to be feared from the consumption of these articles, is an absurdity for which it would be unfair to hold him responsible. No doubt a little sober second thought on the part of those who expected an upheaval in the present sanitary regulations, with a repeal of the laws passed for the public protection will convince them that, be the outcome of further investigations what they may, milk and meat from animals suffering from tuberculosis or other diseases will never be either safe or desirable for human food. Too thorough and stringent precautions can never be taken to insure that such potent carriers of infection reach the consumer in as pure and wholesome a condition as possible.

Considering the ill effect of the heat of the dog days, the medical profession can well afford to smile at the silly clap-trap in the way of editorial criticism offered by some of the lay press in reference to the alleged unnecessary precautions against tuberculosis upon which we have insisted for many years.

A DOMINION MEDICAL DEFENCE UNION.

The District of St. Francis Medical Association, Lennoxville, Quebec, during the past winter organized a Medical Defence Union, obtained a charter and arranged for the enrolment of practitioners in good standing in all parts of the Dominion as members on the payment of a yearly fee, or life membership on the payment of a larger fee, if desired. We referred editorially to this organization some time ago, and while approving of the scheme in a general way, we then expressed the opinion that this work more properly belonged to and could be more efficiently carried out

by an association representing the profession in all parts of the Dominion. We are pleased to learn that the Union before referred to are of the same opinion and have accredited Dr. Russel Thomas to the Dominion Medical Association at Winnipeg as their representative, with instructions to arrange if possible for the Dominion Association to take over the work of the local union, appoint their own officers and make such other arrangements for carrying out the scheme as they may think best. The St. Francis Association in this matter have shown a most commendable spirit and we hope the Dominion Association will receive their proposition favorably. There is certainly no more urgent need on the part of the medical profession than the formation of such a union and our national association could undertake no more important service than lending itself to carrying the scheme into effect. We hope, and in doing so we believe we express the wishes of our professional brethren in all parts of the Dominion, that after the Winnipeg meeting we may have a Union for Medical Defence operative in all parts of Canada.

EDITORIAL NOTES.

Extensive alterations and improvements are being made in Trinity Medical College, preparatory to the opening of the fall session on Sept. 25th. Dr. Charles Sheard will deliver the introductory lecture.

It is rumored that a movement is on foot, with good financial backing, looking toward the establishment in Toronto of a new hospital to be devoted exclusively to the treatment of the surgical diseases of children.

The annual meeting of the British Columbia Medical Association will be held in Victoria on Sept. 5th and 6th, 1901. This date has been chosen so as to allow of the attendance of professional brethren from the east, after the meeting of the Dominion Association at Winnipeg. A cordial invitation is extended by the British Columbia Association to all and sundry to come and partake of western hospitality and to enjoy the cooling breezes of the Pacific.

The British Medical Journal of July 20th makes the following suggestion in reference to a fusion of the various medical societies in Toronto. Our local necessities are evidently known abroad and the scheme mentioned is well worth careful consideration: "It is hoped that

Dr. Alexander Macphedran, Professor of Medicine in the University of Toronto, and Dr. John Taylor Fotheringham, one of the Teachers in Trinity Medical College, Toronto, who are now in London, will be present at the annual meeting of the Association, when, we are sure, they will be made very welcome. Dr. Blackader of Montreal is also on his way to Cheltenham. We remember that when the Association met in Montreal, a wish was widely expressed (and we are under the impression that Dr. Cameron shared in it) that the various Medical Societies in the city of Toronto might see their way to fusing themselves into one body which should constitute the Toronto Branch of the British Medical Association, the "Units" at the same time retaining their autonomy and distinctive characters so far as their special work is concerned. Supposing that the scheme for the improved Constitution of the British Medical Association should find favour at the general meeting, it would be a very happy commencement of the new era if so important a Canadian centre as that of Toronto could arrange to fall in line with us. We are, of course, to say how the Council would view the question of "autonomy," but unable from the tenour of the discussions in the Constitution Committee we have no hesitation in saying that the ideas of that Committee were characterized by a liberality of thought and a breadth of feeling towards "Divisions" and Branches—British, Colonial, and Indian—which promised most satisfactory results. We venture to express the hope that our Canadian brethren will take an active personal interest both in the business and in the scientific part of the forthcoming meeting, and that they will also be able to carry back to Canada pleasant recollections of the social part of the programme. Never was the time more opportune than it is at present for a general and complete association of British medical men, every one of whom is with ourselves, no doubt, equally desirous of helping in the great work of organization.

PERSONAL.

Dr. Harold Parsons is taking a holiday in Muskoka.

Dr. Geo. H. Fish (Trinity '98) has begun practice at Brougham, Ont.

Dr. J. L. Davison, F. Fenton and D. Gibb Wishart are spending a holiday on Georgian Bay.

Dr. Herbert A. Bruce has taken possession of his beautiful new house at 68 Bloor street east.

Dr. W. P. Caven has resumed practice after his holiday in Europe and afterwards in Muskoka.

Dr. Geoffrey Boyd and Mrs. Boyd have returned to Toronto after spending a month on the Georgian Bay.

Dr. A. P. Chalmers (Trinity '92) and Mrs. Chalmers of Oil Springs, have left for Europe where they will spend about a year.

Dr. Harry B. Anderson was married on Aug. 14th to Miss Florence Northway, daughter of John Northway Esq., Maple Avenue, Rosedale.

Dr. R. J. Dwyer has located on Bloor street at the head of Spadina Ave., in one of the fine houses built by Dr. G. S. Ryerson.

Dr. L. M. Palmer and R. A. Stevenson of Toronto have sailed from Boston for Liverpool. They will spend a short holiday in Europe.

Dr. Charles B. Shuttleworth, Demonstrator of Anatomy, Trinity Medical College, leaves for Europe in a few days where he will spend a year or two in post graduate study.

The many friends of Dr. Charles D. Parfitt (Trinity '94) will be pleased to learn that he has quite recovered from his serious illness of over a year ago which necessitated his giving up practice for a time.

Dr. F. C. Macdonald (Toronto '99) who served in the Royal Canadian Artillery during the South African war and afterwards as a civil surgeon has returned to Toronto none the worse for his various experiences.

BOOK REVIEWS.

ATLAS AND EPITOME OF OBSTETRIC DIAGNOSIS AND TREATMENT.

By Dr. O. Shaeffer, of Heidelberg. From the Second Revised German Edition. Edited by J. Clifton Edgar, M. D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 122 colored figures on 56 plates, 38 other illustrations, and 317 pages of text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00 net. Canadian Agents, J. A. Carveth & Co.

The difficulties attending the successful teaching of Obstetrics are much enhanced in Ontario by the lack of material and opportunity for practical demonstration, and by the precautions with which, wisely enough from one standpoint, maternity institutions are surrounded, so that the student graduates with but a meagre experience unless he has been more than ordinarily fortunate. This fact increases the importance of mechanical aids, charts and illustrations and creates the necessity for books such as this atlas. It would be idle to claim for it the position of a

text-book on Midwifery, the arrangement being inconvenient for continuous reading; but as a companion in the study or the teaching of this subject, its plates and illustrations should make it invaluable, while the practitioner will find it a convenient book of reference especially on the subjects of abnormalities and obstetric operations.

The material for the very complete set of original drawings, which are here reproduced in a beautiful series of lithographs, was furnished by the Munich and Heidelberg Clinics; these rival in excellence anything recently attempted and alone make the book a good investment. Add to this a text which comprises extremely well completeness and brevity in the discussion of symptomatology and treatment, with a list of prescriptions useful in obstetrical practice and we have a series of features that should insure this number maintaining the popularity of the "Saunders' Medical Hand-Atlas."

This work while complete in itself is intended to be grouped as Vol. II with the "Atlas and Epitome of Labor and Operative Obstetrics" by the same author—also reviewed in this number. It is a volume of convenient size, bound in cloth, with 305 pages of text and 160 illustrations.

A. J. M.

A MANUAL OF HYGIENE FOR STUDENTS, PHYSICIANS AND MEDICAL OFFICERS.

By Charles Harrington, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with twelve plates and one hundred and five engravings. Lea Brothers & Co., Philadelphia and New York, 1901.

Dr. Harrington has made a valuable addition to medical literature and is deserving of the thanks not only of students and practitioners of medicine but also of all medical officers, civil and military.

In this book of about seven hundred pages he has embraced everything which the sanitary scientist must know and has presented it to us in a most fascinating form.

He devotes the first two hundred pages to Foods, and treats the subject exhaustively; then we find "Air," "Soil" and "Water" each given due consideration; "Habitations and Schools," "Disposal of Sewage and Garbage," "Disinfectants" and "Quarantine" are each treated of in separate chapters; while the hygiene of "Army," "Navy," "Tropics," "Occupations" and that of the "Person" make interesting reading.

"Vaccination" is not discussed as fully as we would have wished for, the chapter on that subject consisting of little more than an argument in favor of the operation.

Dr. Harrington's closing sentence in this chapter perhaps explains his reason for limiting his remarks on the subject—"As a matter of fact, the subject of protective inoculation, except so far as it relates to small-

pox, is as yet only in its infancy, but at the same time is one of the most promising fields of scientific research."

With the exception of this one chapter we are delighted with the work and can most heartily recommend it to any one desiring light on the subject.

F. F.

A MANUAL OF PERSONAL HYGIENE.

Proper Living upon Physiologic Basis, by American Authors. Edited by Walter L. Pyle, A. M., M. D., Assistant Surgeon to the Wills Eye Hospital, Philadelphia. Illustrated, 350 pages. Published by Saunders & Co., Philadelphia, Pa. Canadian Agents, J. A. Carveth & Co., Toronto. Price \$1.50.

This Manual sets forth the best means of developing and maintaining physical and mental vigor, and consists of a series of articles upon the Hygiene of the Digestive Apparatus, the Skin and its appendages. The Vocal and Respiratory Apparatus, the Ear, the Eye, and the Brain and Nervous System, and a concluding chapter on Physical exercise.

Digestion is treated by Stockton, and the Skin by Fox, and the Voice by Ingals, a sufficient guarantee that the work is well done.

This volume is worthy of being placed in the hands of the teachers, and especially of the mothers, who are desirous of securing the development of their pupils and off-spring in such a way as to secure the fullest bodily health. Particular attention is given to such important matters as the care of the teeth, regulation of the diet, the influence of dress and and carriage upon digestion in women, the care of the complexion, the clothing, the selection of shoes, care of the hair, etc., etc.

These are all topics of which the general public know little, and the Medical profession, not much more; and the more widely such knowledge, as is contained in these pages, is disseminated, the more perfect will be the physical development of our race.

D. J. G. W.

A MANUAL OF THE DISEASES OF THE NOSE AND THROAT.

By C. G. Coakley, Second Edition. 103 Engravings, four Colored Plates, 566 Pages. Published by Lea Brothers & Co., New York and Philadelphia. Canadian Agents, J. A. Carveth & Co., Toronto. Price, \$2.75.

This valuable Manual, in addition to revision contains an entirely new chapter on Affections, of the Upper Respiratory Tract, in the Infectious Diseases, covering the subjects of Scarlet Fever, Measles, Pertussis. Typhoid, Glanders, Erysipelas, etc.

The appearance of a new edition, so shortly after the first, is highly creditable to the author, and this volume will have a ready sale, owing to its convenient size, clearness of type, and readableness.

D. J. G. W.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, Useful in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College, etc. Volume 11, Electrotherapy, by George W. Jacoby, M.D., Consulting Neurologist to the German Hospital, New York City; to the Infirmary for Women and Children, etc. In two Books: Book II, Diagnosis; Therapeutics. Illustrated. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa. Canadian Agents, Chandler & Massey, Ltd., Toronto and Montreal. Price, eleven volumes, \$22.00 net.

Volume II of this system deals with the applications of electricity in the diagnosis, prognosis and treatment of disease. The opening chapters are devoted to electrophysiology and electropathology. The methods of applying electrical currents in the diagnosis of disease is fully discussed and will prove very useful to the clinician. The various therapeutic applications of electricity are dealt with in a practical manner and the limits of its usefulness in different diseases defined. One is favorably impressed with this part of the work from the fact that it avoids overestimating the value of electrotherapeutics as is so often done in special treatises on the subject—a fault which makes them unsafe guides for the general practitioner. An addendum contains chapters dealing with the “Surgical Uses of Electricity” by John Chalmers Dalosta; “Electricity in Diseases of the Eye” by Dr. Edward Jackson, of Denver; one on “Diseases of the Nose, Throat and Ear” by Dr. Wm. Scheppegeggrell, of New Orleans; “Electricity in Gynaecology” by Dr. Franklin H. Martin, of Chicago, and “The Electric Therapeutics of Skin Diseases” by Dr. A. H. Ohmann-Dumesnil, of St. Louis. The whole volume contains some 300 pages, is beautifully printed and well illustrated. This system should find a place in the library of every up-to-date practitioner.

Clinical Pathology of the Blood—A Treatise on the General Principles and Special Applications of Hematology. By James Ewing, A.M., M.D., Professor of Pathology in Cornell University Medical College, New York City. Illustrated with thirty engravings and fourteen colored plates drawn by the author. Lea Bros. & Co., Philadelphia and New York, 1901.

This is a work on the clinical pathology of the blood emanating from the pathological laboratory. Part I deals with General Physiology and Pathology of the Blood, including technique; Part II with the Special Pathology of the Blood; Part III with the Blood in the Acute

Infectious Diseases; Part IV in Constitutional Diseases; Part V in General Diseases of the Viscera, and Part VI with Animal Parasites. It will thus be seen that the whole range of Haematology is covered.

The author has done his work thoroughly and has succeeded in producing the most complete treatise on the subject that has appeared in English. The different chapters are followed by very complete bibliographies which will be found especially useful to students in this field of medicine. The plates are fairly good, but present a rather diagrammatic appearance. We also think a larger number of illustrations would have been very acceptable in a work of this sort. Taken altogether, however, the work is an excellent one and will give satisfaction to any one interested in this rapidly advancing branch of practical medicine.

H. B. A.

SAUNDERS' QUESTION COMPENDS.

Essentials of Refraction and of Diseases of the Eye. By Edward Jackson, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic. Third Edition, Revised and Enlarged. 12mo., 261 pages, 82 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.00 net.

In this edition the work has been carefully revised and very much enlarged, the contents being more complete and more symmetrical than was possible in the earlier editions. The injuries of the eye by traumatism and the ocular symptoms and lesions of general diseases have now been given a consideration proportioned to the great importance they assume in the work of the general practitioner. There has been added also an account of the application of the tests of vision required in the army, navy and railway service.

This work has long since proved its usefulness to the beginner in ophthalmic work, to the student, and to the busy practitioner. Dr. Jackson, its author, is well known as a successful teacher. The entire ground is covered, and the points that most need careful elucidation are made clear and easy.

In the opening chapter the author deals clearly and concisely with the Essentials of Refraction.

In the next the Diseases of the Eye are described which occupies about 140 pages; disorders of movement, of the field of vision, of the lachrymal apparatus, lens, retina, iris etc., etc., are practically dealt with. At the end of this chapter is a list of medicines to be used with directions for their employment.

In the third section "Injuries of the Eye" are reviewed, such as contusions penetrating wounds, foreign bodies and burns.

A chapter on eye symptoms, of general diseases now follows. Affects produced by diseases of the nervous system, circulators and renal systems

chronic diseases, acute infectious diseases and toxic ambly opus—are dealt with.

The last chapter deals with the requirements of visions for schools, railroads and the public services.

Altogether this small volume is a valuable addition to the list of smaller treatises.

D. M. A.

SAUNDERS' MEDICAL HAND-ATLASES.

Atlas and Epitome of the Nervous System and its Diseases. By Professor Dr. Chr. Jakob, of Erlangen. From the Second Revised German Edition. Edited by Edward D. Fisher, M.D., Professor of Diseases of the Nervous System, University and Bellevue Medical College, New York. With 83 plates and copious text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.50 net. Canadian Agents, J. A. Carveth & Co., Toronto.

One does not often see so good a piece of typography and book-making as this—and its merits as a handbook for the practitioner are beyond praise. For the proper study of nervous diseases education must proceed along two lines, better *pari passu*—the histological side means years of work in laboratory, and the clinical likewise years of work in practice. If either one of these two lines of study may be omitted it is the former, and with this Atlas and Epitome in his library, and transferred to his own mind and memory, the general practitioner is quite sufficiently armed for the prosecution of the clinical side of the study of this most important branch of medicine.

J. T. F.

SENN'S PRACTICAL SURGERY.

Practical Surgery: A Work for the General Practitioner. By Nicholas Senn, M.D., Ph.D., L.L.D., Professor of Surgery, Rush Medical College, Chicago. Handsome octavo volume of 1133 pages, with 650 illustrations, many in colors. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$6.00 net. J. A. Carveth & Co., Toronto, Canadian Agents.

Semper paratus is the motto of the book, and the author adheres to this motto from first to last.

It is not a work on general Surgery but a clear and able exposition of certain important sections of the subject. Especially those of the nature that requires prompt and particularly thoughtful handling.

The section on Emergency work is well put, primary treatment of wounds, suture of veins and tendons tramoses and ligature being well given and freely illustrated.

The chapter on Military Surgery, and what the military Surgeon should be, is full of interesting and instructive points not alone surgical but ethical and moral.

Fractures, Dislocations and Gunshot Wounds are treated at great length. A short chapter is devoted to Empyema, but it is much to the point there is no suggestion of doubt as to the propriety of the radical operation.

Abdominal Surgery is the chief theme of the Volume. Peritonitis in general, is first considered, and from every possible point of view, appendicitis is next dealt with, all that is new and useful nicely put and with much good sound advice. Under the heading of abdominal section are grouped the many conditions requiring it, with all the most approved methods of intestinal suture resections and anastomoses, occupying some 200 pages of valuable information and pleasant reading.

Hernia again makes an excellent chapter.

Joint resections and amputations, splendidly illustrated, close the work. It is indeed a volume of great value and should be sought after.

H. C. P.

Progressive Medicine. March, 1901., Vol. I. H. A. Hare & H. R. M. Landis. Lea Bros. & Co., Phila., & New York.

This is if possible the best volume in the well-known series, now indispensable to those who know its merits

The contributors, and their subjects, are given below. The articles are so condensed and so well brought up to date, that we can scarcely review them, as they are themselves abstracts of all the recent important work done in the subjects discussed. Crandall has an article on Pediatrics which should be seen by all who are called on to treat children during this season. The Surgery of the Head, Neck and Chest is treated of by J. C. DaCosta. Packard's articles on Infectious Diseases, (Acute Rheumatism, Pneumonia and Influenza are included, with Typhoid and others) are most stimulating and valuable reading. Ludwig Hektoen writes on Pathology and, as one would expect, Bacteriology and Physiological Chemistry are much in evidence. The article includes an interesting resumé of present views and theories as to tumours and their origin. Rhinology and Laryngology are treated by Logan Turner of Edinburgh University, and Otology by R. L. Randolph of Johns Hopkins. This volume is thus seen to be of value and interest to the surgeon, the physician, the laboratory hand and the specialist.

J. T. F.

PUBLISHERS' DEPARTMENT.

THE EARLY DIAGNOSIS OF LOCOMOTOR ATAXIA.

The poor results derived from the treatment of tabes is often due to the fact that an early diagnosis has not been made or that patients do not apply for treatment in the early stages of the disease. Erb (*Med. Wochenschr.*) details a series of cases which had all been preceded by symptoms of secondary syphilis, some as far back as twenty-four years. In one group of cases the tendon reflexes were normal even after four to seven years duration of slight lancinating pain, bladder insufficiency, sensory disturbances, easy fatigue, slight pupillary sign and "Rhombberg's Symptom." A second group presented no subjective symptoms whatever, and but very few and almost unnoticeable objective symptoms. Still another group was attended by marked gastro-intestinal disturbances, not typical of tabes, and with bilateral paresis of the sixth nerve and pupil sign. Author insists on the necessity of always investigating the knee-jerk and pupil reflex in suspected cases. Tabetic symptoms with an antecedent syphilis are always serious. Absence of a syphilitic history does not establish the existence of tabes, even though some symptoms may exist. For the pains in tabes dorsalis, Antikamnia and Salol Tablets have been found most excellent when given in doses of two tablets every two or three hours. The antikamnia acts particularly upon the spinal cord and its sensory tracts, and consequently takes the place of opium and its alkaloids so often used to relieve patients subject to these attacks. The favorable effect of salol in this and similar conditions is well known.

HYPEREMESIS GRAVIDARUM.

Dr. J. W. P. Smithwick writes in the *Southern Medical Journal* concerning vomiting during pregnancy and its remedies. He says: "I find that Ingluvin, manufactured by Wm. R. Warner & Co., of Philadelphia, Pa., gives me the best clinical results. I have frequently seen patients who would vomit immediately upon taking anything into the stomach almost relish this preparation, and the vomiting immediately cease, irrespective of its primary cause. Having had such good results with it in the various forms of nausea and vomiting, I was induced to try it in the vomiting of pregnancy, both physiological and pathological, and have had excellent results up to date. In those patients in whom the vomiting amounts to nothing more than the "morning sickness," which may be considered physiological, I have found it to give a very great amount of relief, as well as in others, when it becomes to be pathological. It relieves the nausea and increases the appetite and assimilation to a marked degree,

so that the patient's system is put in an excellent condition to undergo the ordeal of labor. By relieving the nausea and increasing the assimilation and digestion, it aids in regulating the functions of the liver and kidneys, and other emunctories of the organism, thereby overcoming all tendencies to the occurrence of postpartum complications and eclampsia.

Dr. Smithwick gives a number of cases, one of which is quoted: "Mrs. S.—, aged 32. This was the third pregnancy. She had been troubled no little with nausea and vomiting during the preceding pregnancies, but at this time the condition was very greatly exaggerated beyond what it had been. She consulted me during the sixth week, stating that there were very few times she could retain either food or drink in her stomach. Her bowels were constipated, skin thick and sallow in appearance, and tongue heavily coated. She was much emaciated, and in low spirits, as she had had some difficulty with former births, all being instrumental deliveries, due to inertia of the uterus. I prescribed Ingluvin in three daily doses of fifteen grains each. In one week she reported that she was improving rapidly, having only had, during that time, two spells of nausea and vomiting. Her appetite was good, and she could retain almost anything that she desired for food. Her bowels were in an active condition, and skin much better in appearance. Her spirits were decidedly more buoyant. I directed her to continue the medicine in the prescribed dose until near the time of confinement. She did so, and I attended her. The labor was perfectly normal in all respects, and was a short one when compared with her previous labors, lasting about six hours. Convalescence was rapid, and recovery complete, and she stated that she never felt so well that early after a confinement." I attribute all the improvement in this individual case to the use of Ingluvin, being fully convinced of its value as a therapeutic agent."

SANMETTO IN SPASMS OF BLADDER NECK.

Sanmetto is not new to me as I have used it two years. I will report a case that came under my treatment on the fourth day of February. A lady about forty years of age had spasms of the neck of the bladder. She was in constant pain. She could neither sleep nor sit still. She was compelled to urinate as often as every half hour. I commenced giving her Sanmetto, a teaspoonful every two hours for the first twelve hours. The next twenty-four hours I gave her a teaspoonful every three hours, and the next twenty-four hours, every four hours, unless sleeping. Discharged the woman the fifth day as well, and she has been well ever since. A prominent physician of our city had been treating this patient, but she received no benefit from his treatment whatever.

WM. S. McLEAN, M. D.

Saginaw, E. S., Mich.

WHEY-CREAM MODIFICATIONS IN INFANT-FEEDING.

F. W. White and M. Ladd (*Philadelphia Medical Journal*, Feb. 2, 1901), from their work in this line, have arrived at the following conclusions:

1. By the use of whey as a diluent of creams of various strengths they are able to modify cow's milk so that its proportions of caseinogen and whey proteids will closely correspond to the proportions present in human milk. They therefore render it much more digestible and suitable for infant feeding.

2. The best temperature for destroying the rennet enzyme in whey is 65.5° C. Whey or whey mixtures should not be heated above 69.3° C. in order to avoid the coagulation of the whey proteids. The amount of whey proteids in the whey obtained by these observers was 1 per cent., while in the analysis of the whole milk approximately three-fourths of total proteid was caseinogen and one-fourth was whey proteids.

3. On the basis of these analyses they were able to obtain whey cream mixtures, with a maximum of 0.90 per cent. and a minimum of 0.25 per cent. of whey proteids in combination with percentages of caseinogen varying from 0.25 to 1; of fats, from 1 to 4 per cent; of milk-sugar from 4 to 7 per cent.

4. The emulsion of fat in whey, barley-water, gravity cream and centrifugal cream mixtures was the same, both in the macroscopic and microscopic appearances. The combination of heat and transportation, such as sometimes occur in hot weather, partially destroys the emulsion in all forms of modified milk, but this disturbance can be prevented by the simple precaution of keeping the milk cool during delivery.

5. Whey cream mixtures yield a much finer, less bulky and more digestible coagulum than plain modified mixture with the same total proteids; the coagulum is equalled in fineness only by that of barley-water mixtures. The coagulum yielded by gravity cream mixtures and centrifugal cream mixtures is the same in character.—*Medical Age*.

A TIMELY REMINDER.

The importance of keeping the baby's nursing bottle perfectly clean especially in hot weather, is not sufficiently realized by mothers; many of them are not only careless but actually ignorant of the danger lying in unclean bottles, and we feel called upon to direct attention anew to this menace to infantile life. Mothers should be urged again and again to keep the bottle, also the nipple, perfectly clean.

A bottle having an opening in the lower end through which a stream of water may be run from the faucet, is the one that can be most easily cleaned and, therefore, the one that is most likely to be kept clean—*Pediatrics*.

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